

VDOİHİ

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

Cilt 2.3.3.1.7.1.1.20

İsmail YILMAZ

Matematik / İstatistik / Olasılık

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık Cilt 2.3.3.1.7.1.1.20

İsmail YILMAZ

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1. Bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

Dili: Türkçe + Matematik Mantık



K. Atatürk

Türkiye Cumhuriyeti Devleti
Kuruluşunun
100. Yılı Anısına

DÜZELTME

Bu cilt için

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

simgesi yerine

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

simgesi olmalı.

Yazar Hakkında

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

VDOİHİ

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- ✓ Teorik kabullerle genetikle ilişkilendirilmiştir.
- ✓ Bilgi merkezli değerlendirme yöntemidir.

Sanırım bilgi ve teknolojideki kaderimiz veriyle ilişkilendirilmiş.

İÇİNDEKİLER

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar	1
Simetriden Seçilen Dört Duruma Göre Tek Kalan Simetrik Olasılık	3
Dizin	16

GÜLDÜNYA

Simge ve Kısaltmalar

n : olay sayısı

n : bağımlı olay sayısı

m : bağımsız olay sayısı

l : bağımsız durum sayısı

L : simetrimin bağımsız durum sayısı

l : simetrimin bağımlı durumlarından önce bulunan bağımsız durum sayısı

L : simetrimin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

k : simetrimin bağımlı durumları arasındaki bağımsız durumların sayısı

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

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

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

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

l_s : simetrimin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

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

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

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

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

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

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

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

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

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

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

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

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

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

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

D : bağımlı durum sayısı

D_i : olayın durum sayısı

s : simetrinin bağımlı durum sayısı

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

m : olasılık

M : olasılık dağılım sayısı

U : uyum eşitliği

u : uyum derecesi

s_i : olasılık dağılımı

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

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

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

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

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

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

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

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

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

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

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

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herhangi iki ve son durumuna bağlı tek kalan simetrik olasılık

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

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

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

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

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

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

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$fzS_{j_{ik}, j^{sa}, D}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu

bağımlı simetrisinin herhangi iki durumuna bağlı tek kalan düzgün simetrik olasılık

$fzS_{j_s, j_{ik}, j^{sa}}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

$fzS_{j_s, j_{ik}, j^{sa}, 0}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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$fzS_{j_s, j_{ik}, j_i}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

${}^0S_{j_s, j_{ik}, j_i, 0}^{DSST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

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$f_z S_{j_i}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık

$f_z S_{j_i, 0}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık

$f_z S_{j_i, D}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık

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$f_z S_{j^{sa}}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu

simetrisinin durumuna bağlı tek kalan düzgün olmayan simetrik olasılık

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

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$fz, 0S_{j_s, j_{ik}, j_i^{sa}, j_i}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı

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

$fz,0S_{j_s,j_{ik},j^{sa},j_i,0}^{DOST}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık

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E2

BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

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

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

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

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

SİMETRİDEN SEÇİLEN DÖRT DURUMA GÖRE TEK KALAN SİMETRİK OLASILIK

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + 1 \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5, l = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

$$D > n < n \wedge l = l_s - 0 \wedge$$

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

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

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

$$D \geq \langle n \wedge l_s \rangle D \leq n+1$$

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

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

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

$$D \geq n \leq l_s \wedge l = k > 0 \wedge$$

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$$D > n < n \wedge l = l_s - 0 \wedge$$

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

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

$$s \geq 3 \wedge s \leq s + k \wedge$$

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

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

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

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

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

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

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

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

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

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

$s \geq 5 \wedge s = s + l_k \wedge$

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

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

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

$$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$$

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

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

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

$$n \geq n \wedge I = k > 0 \wedge$$

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n_i-j_s+1)} \sum_{j_i=j^{sa}+l_i-l}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$$D > \mathbf{n} < \mathbf{n} \wedge l = \mathbf{n} - 0 \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq n - l_s \wedge I = l_{k_1} > 0 \wedge$$

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

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

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

$$\sum_{n_i=0}^n \sum_{(n_{is}=n+n_i+1)}^{(n_i+1)} \sum_{n_{ik}=0}^{(n_i-j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{(n_{sa}=l_{sa}-j_{sa}+1)}^{(n_{sa}-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s-n-j_i+1)}$$

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$s \geq 5 \wedge s = s + 1 \wedge$

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

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

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

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

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

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

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

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

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

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

$$D \geq n < n \wedge l = s > 0 \wedge$$

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

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

$$s \geq 5, l = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

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

$s \geq 5 \wedge s = s + l_k \wedge$

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

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

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

$$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$$

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + 1 \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$s \geq 5, \dots = s + \mathbb{k} \wedge$

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

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

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

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

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

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

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

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

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

$$D > \mathbf{n} < \mathbf{n} \wedge l = \mathbf{n} - 0 \wedge$$

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

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

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

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

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

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

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

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

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

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

$\dots \wedge I = k > 0 \wedge$

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

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

$s \geq 5 \wedge s = s + k \wedge$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

$$\dots (n_{sa} = \dots - j_{sa} + 1) n_s = n - j_i + 1$$

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

$s \geq 5 \wedge s = s + 1 \wedge$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5, l_s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$D > n < n \wedge l = l_s - 0 \wedge$

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

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

$s \geq 5 \wedge s \leq s + k \wedge$

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+k_1)}^{()} \sum_{j_i=j_s+l_i-l_{sa}}^{()}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

$$fz^S_{j_s, j_{ik}, j_{sa}, j_{sa}^{ik}} = \sum_{l=1}^{(l_{ik} - l_{sa}^{ik} + 2)} \sum_{j_{ik}=l}^{(n_i - j_s + 1)} \sum_{j_{sa}=l}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}^{ik}=l}^{(n_{sa} + j_{sa}^{ik} - k_2)} \sum_{j_{sa}=l}^{(n_s - j_i + 1)}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$s \geq 5 \wedge s = s - \mathbb{k} \wedge$

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

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

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

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

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

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

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

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

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

$$D > n < n \wedge l = l_s - 0 \wedge$$

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

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

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

$$\frac{(n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

$$f_z^S j_s, j_{ik}, j_{sa}^{ik}, j_i$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

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

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

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

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

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

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

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 = j_{sa} - 2$$

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

$$s \geq 5 \wedge s = s + k \wedge$$

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

$$\sum_{j_s=j^{sa}}^{n_{sa}-s-1} \sum_{l_s=l_i+n-D}^{l_s+s-l-j_s+1} \sum_{j_i=l_i+n-D}^{j_i+l_i+n-D}$$

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

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

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

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

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

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

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

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

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

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

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

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

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

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

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

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

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

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

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

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

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

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

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

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

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!}$$

$$\sum_{k=l}^{j_s - l} \sum_{j_s = j_{ik} + l_s}^{j_s - l - j_{sa}^{ik} + 1} \dots$$

$$\sum_{j_i = j^{sa} + l_{ik} - l_{sa}}^{j_i - j^{sa} + l_{ik} - l_{sa}} \dots$$

$$\sum_{n_{is} = n + k_1}^n \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \dots$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} - k_2)}^{(n_{sa} = n + k_3 - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

GÜLDÜMVA

$$\begin{aligned}
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2} \sum_{l_i-l+1} \\
& \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{(n_{ik}=n+l_k-l_{k3}-j_{ik}+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{k1})} \\
& \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{(n_{sa}+j_{ik}-j_i-l_{k3})} \\
& \sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)} \sum_{(n_s=n_{sa}-1)} \\
& \frac{(n_i - l_i - 1)!}{(n_i - l_i - j_s + 1)!} \cdot \frac{(n_{is} - l_{k1} - 1)!}{(j_{ik} - j_s - l_{k1} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!} \\
& \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D - j_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f^z \sum_{j_s}^{j_s^{sa}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s^{sa}, j_i} \right) \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}+s-l-j_{sa}^{ik}+1} \sum_{j_i=l_i+n-D}^{j_i} \sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}-1)!} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}=l_{ik}+n-D)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)} \\
& \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{(n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{i_1}+1)} \\
& \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j^{sa}-j_i-1)} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{(n_s=j_i+1)} \\
& \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$D - l_s + n - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq n - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^{\mathcal{S}}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=n-l)}^{(\cdot)} \sum_{j_i=n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+l)} \sum_{(n_{is}+j_s-n)}^{n_{is}+j_s-1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik} = l_{ik} + n - D}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_{sa} + n - D)}^{(j_i + j_{sa} - s - 1)} \sum_{j_{ik} = n - D}^{l_{ik} + s - l - j_{sa}^{ik}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 + \dots + 1}^{n_{is} + j_s - k_1} \\
 & \frac{\sum_{(n_{ik} + j_{ik} - j_{sa}^{ik})}^{(n_{sa} + j_{sa} - j_i - k_1)} \sum_{(n_{sa} + k_3 - j_s)}^{j_i + 1}}{\dots} \\
 & \frac{\dots}{(j_{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{is} - n_{sa} - k_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_s - n_{sa} - j_{sa}^{ik})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa}^{ik} - s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
\end{aligned}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq l_i > n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{lk}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
fz_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
&\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1} \\
&\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \\
&\sum_{(n_{sa} = n + k_3 - j_i + 1)}^{(n_{ik} + j_{ik} - j^{sa})} \sum_{n_s = n - j_i}^{n_{sa} + j_s - j_i - k_3} \\
&\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
&\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
&\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
&\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
&\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
&\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
&\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
&\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
&\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{ik}=j_s-l_{sa}} \sum_{j_i=l_i+n-D} \sum_{n_i=j_{ik}+j_s-j_{ik}-k_1} \sum_{n_{is}=n+k_1+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j_{sa}+1} \sum_{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_s+s} \sum_{=l_i+n-D} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{sa}+k_3-j_s)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{\dots - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1}$$

GÜLDENYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > l - n + 1 \wedge$$

$$D + l_s - s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_i-l+1)} \sum_{j_i=l_i+n-}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{n_{sa}+j_{ik}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j_{ik}-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}} \right)$$

$$\sum_{j_i = n + k}^n \sum_{n_{is} = n + k_1 - j_s + 1}^{n_i - j_s + 1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^l \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{lk}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
fz^S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
&\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n}^{l_i-l+1} \\
&\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
&\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3} \\
&\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
&\frac{(n_{ik}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
&\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
&\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
&\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
&\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
&\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
&\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$n > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$\begin{aligned}
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \right) \\
 & \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n}^{l_s+s-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_{ik}+1)! \cdot (n_s-n-j_i+1)!} \\
 & \frac{(j_s-2)! \cdot (n_i-j_s+1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \\
 & \frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j_{sa}^{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(n_{sa}-1)! \cdot (n_{sa}+j_{sa}^{ik}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDENWA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{sa} - j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - j_{sa} - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i > \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^i - 1, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
fz S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
&\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
&\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \\
&\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(n_{sa}+j_{sa}-j_i-k_3)} \\
&\sum_{(n_{sa}=n+k_3)}^{(n_{sa}=n+k_3)} \sum_{(n_s=n-j_i)}^{(n_s=n-j_i)} \\
&\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
&\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
&\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
&\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
&\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
&\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
&\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
&\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(j_s - j_{ik} - \mathbb{k}_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$j_{ik} = j_{sa} + \dots + (j_{sa} = j_i + \dots + s) j_i = l_i + n - D$$

$$\sum_{n_i = n + \mathbb{k}}^{(n_i - \mathbb{k}_1 + 1)} \sum_{n_i = n + \mathbb{k} - j_s + \dots}^{(n_i - \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)} \sum_{n_{sa} = n - j_i + 1}^{(n_{sa} - j_{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_s - j_{sa} + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j_{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n}^{l_s+s-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{ik}+j_{ik}-j_{sa}^{lk}-j_{sa}^{lk})}^{(n_{ik}+j_{ik}-j_{sa}^{lk}-j_{sa}^{lk})} \sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{lk})}^{(n_{sa}=n+l_{k_3}-j_{sa}^{lk})} \sum_{n_s=n-j_i+l}^{(n_{ik}+j_{ik}-j_{sa}^{lk}-j_{sa}^{lk})} \\
 & \frac{(n_s - n_{ik} - l_{k_1} - 1)!}{(j_s - 2)! \cdot (n_{sa} - n_{ik} - j_s + 1)!} \\
 & \frac{(n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{lk})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{l_s+j_{sa}^{lk}-l} \sum_{(l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_s} - 1)! \cdot (n_{s_a} + j_{i_s} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{\sum} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{(j_s=j_{i_k}+l_s-l_{i_k})} \sum_{j_{i_k}=l_s+n+j_{s_a}^{i_k}-D-1}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}-1} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{(j^{s_a}=j_i+j_{s_a}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l_i \wedge D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = j_{sa}^i + \mathbb{k} \wedge$

$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
& \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n+l_s > D-n+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j_{sa} \leq j_i+j_{sa}-s \wedge j_{sa}+s-j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik}-j_{sa}^{ik}+1 > l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i+j_{sa}-s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(\cdot)} \sum_{j_s=j_{ik}+1}^{(\cdot)} \sum_{j_{sa}=j_i+1}^{(\cdot)} \sum_{j_{ik}=j_{sa}+1}^{(\cdot)} \sum_{(j_{sa}=j_i+1) \dots (s)} \sum_{j_i=l_i+n-D}^{(\cdot)} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{(n_i+1) \dots (n_i+\mathbb{k}-j_s)} \sum_{(n_i+\mathbb{k}-j_s+1) \dots (n_i+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{ik}+1) \dots (n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{(n_{sa}=n_{ik}-j_{sa}+1)}^{(\cdot)} \sum_{n_s=n-j_i+1}^{(\cdot)} \right) \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\begin{aligned}
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa} \ (j^{sa}=l_{sa}+n-D)} \sum_{(j_i+j_{sa}-s-1)}^{l_s+s-l} \sum_{j_i=l_i+n} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})+j_s-j_{ik}-l_{k_3}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa})}^{(n_{sa}=n+l_{k_3}-j^{sa})} \sum_{n_s=n-j_i+1} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{ik}-l_{k_1}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}) \cdot (n_{sa}-1)!}{(j^{sa}-l_{k_1}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(n_{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa} \ (j^{sa}=l_{sa}+n-D)} \sum_{(j_i+j_{sa}-s-1)}^{(l_{sa}-l+1)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_s} - 1)! \cdot (n_{s_a} + j_{i_s} - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot$$

$$\frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^s \sum_{(j_s=l_s+n-D)}^{(j_{i_k}-j_{s_a}^{i_k})} \sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}} \sum_{(j^{s_a}=j_i+j_{s_a}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

GÜLDEN

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_s < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - j_{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq l_s < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = j_{sa}^i + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{l_i-l+1} \sum_{j_i=l_i+n-D} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (j_s+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_s + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{(j_s)} \sum_{j_i=j_{ik}+j^{sa}+1}^{(j_{sa}^{ik}+1)} \right)$$

$$\sum_{j_{ik}=j^{sa}}^{(j_{sa}^{ik}+1)} \sum_{(j^{sa}=j_i+l, l_i) j_i=l_i+n-D}^{(l)} \sum_{n_i=n+\mathbb{k}}^{(n_i+l+1)} \sum_{n_i=n+\mathbb{k}+l-j_s+1}^{(n_i+l+1)} \sum_{n_i=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i+l+1)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}^{(n_s+l-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}) (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDENWALD

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^l \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - l}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} + j_{sa} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_s - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i - 1 \leq l \leq D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_s + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} - 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_s, j_{sa}^{ik}, \mathbb{k}_1, j_{sa}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2-k_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-k_4+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}+s-j_{ik}-k_1} \sum_{j_{sa}^s=j_{sa}+j_{ik}-k_2} \sum_{j_{sa}^s=l_i+n_{is}-D-s} \sum_{j_i=j_{sa}+s-j_{sa}} \right)$$

$$\sum_{n_i=j_{sa}+l_{ik}-l_{sa}}^n \sum_{n_{is}=n+k_1+1}^{(n_i+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+1)} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j_{sa}-j_{sa}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j^{sa}-j_i-1)} \sum_{(n_{sa}+k_3-j)}^{(n_{sa}+j^{sa}-j_i-1)} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-k_1-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_i+n-D}$$

GÜLDÜZYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_i + j_s - n_{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_i - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l_s \leq D + l_s + s - 1 - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k-k_1}^{n_{is}+j_{ik}-k-k_1} \sum_{j_{ik}+1}^{n_{ik}+j_{ik}-k-k_2}$$

$$\sum_{(j^{sa}+1)}^{(n_{ik}+j_{ik}-k-k_2)} \sum_{(n-j_i+1)}^{n_{sa}+j^{sa}-k-k_3}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - j_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}+1}^{l_i-l+1}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - \mathbb{k}_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\lfloor \frac{D-l_i}{j_s} \rfloor} \sum_{(j_s = j_{i_k} + l_s - l_{i_k})}^{(l_i + n + j_{s_a} - D - s - 1)} \sum_{(j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a})}^{l_i - l + 1} \sum_{(j^{s_a} = l_{i_k} + n + j_{s_a} - D - j_{i_k}^{i_k})}^{j_i = l_i + n - D} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_s - j^{sa} - s)!} \cdot \frac{1}{\binom{D}{D + j_s - n - l_i} \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n = \mathbb{k} >$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_3 = \mathbb{k} - \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}} \right)$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{\binom{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)}{j^{sa} = l_i + n + j_{sa} - D - s}} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{\binom{)}{}} \right)$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}-1} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+1)} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_{ik})!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{D}{j_s}} \sum_{j_s=i}^{\binom{D}{j_s}} \sum_{j_{ik}=l_{ik}+1}^{\binom{D}{j_s}-l+1} \sum_{j^{sa}=l_{ik}+1}^{\binom{D}{j_s}-l+1} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_{ik}+l_{ik}+1}^{\binom{D}{j_s}} \sum_{n_{is}=n+l_{ik}-j_s+1}^{\binom{D}{j_s}+1} \sum_{n_{ik}=n+l_{ik}+l_{sa}-j_{ik}+1}^{\binom{D}{j_s}+1} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa}$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_{sa} - l + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!}$$

$$\frac{(D - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_s + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} = \mathbb{k} > 0$$

$$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 \leq j_{sa}^{ik} - 1 \wedge$$

$$s; \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \right)$$

$$\sum_{j_{i_k}=l_s+n+j_{s_a}^{i_k}-D-1}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}} \sum_{(l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+1)}^{(l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}+1}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{C}{j_s - l_s + l_{ik}}} \sum_{j_{ik}=l_s + j_{sa}^{ik} - D - 1}^{j^{sa} + j_{sa}^{ik} - (D + j_{sa} - D - s - 1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+l_k+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

GÜLDÜZ

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}-l-j_{sa})}^{(l_{sa}-l+1)} \sum_{(j_i=l_i-s-j_{sa})}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k_1+j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k}^{n_{is}+j_s-l_k-l_{k1}} \sum_{(n_{ik}+j_{ik}-l_{k2})}^{n_{sa}+j_{sa}-l_{k2}} \sum_{(n_{is}-l_{k1}-1)}^{n_{sa}+j_{sa}-l_{k2}} \\
 & \frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - l_{k1})!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}+s-j_{ik}-k_1} \sum_{j_{sa}^s=j_{sa}+j_{ik}-k_2} \sum_{j_{sa}^{ik}=j_{sa}+j_{ik}-k_3} \sum_{j_{sa}^s=j_{sa}+j_{ik}-k_3} \sum_{j_{sa}^{ik}=j_{sa}+j_{ik}-k_3} \sum_{j_{sa}^s=j_{sa}+j_{ik}-k_3} \sum_{j_{sa}^{ik}=j_{sa}+j_{ik}-k_3} \right)$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j_s-j_{sa}+1}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{sa}-j_i-1)}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-k_1-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{(\cdot)}$$

GÜLDÜZYA

$$\begin{aligned}
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
& \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_i - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)
\end{aligned}$$

$$D \geq n < n \wedge l_s > l_i - n + 1$$

$$2 \leq l_s \leq D + l_s + s - 1 - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_Z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \binom{(l_s+j_{sa}-l)}{\quad}$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1} \binom{(n_i-j_s+1)}{\quad} \binom{n_{is}+j_{ik}-\mathbb{k}_1}{\quad}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-\mathbb{k}_3)} \binom{(n_{ik}+j_{ik}-\mathbb{k}_2)}{\quad} \binom{n_{sa}+j^{sa}-\mathbb{k}_3}{\quad}$$

$$\frac{\binom{(n_i-n_{is})}{(j_s-2)} \binom{(n_i-n_{is}-j_s+1)}{\quad}}{\quad}$$

$$\frac{\binom{(n_{is}+j_{ik}-\mathbb{k}_1-1)}{\quad}}{(j_{ik}+j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{\binom{(n_{sa}-n_s-1)}{\quad}}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{\binom{(n_{sa}-n_s-1)}{\quad}}{(n_{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

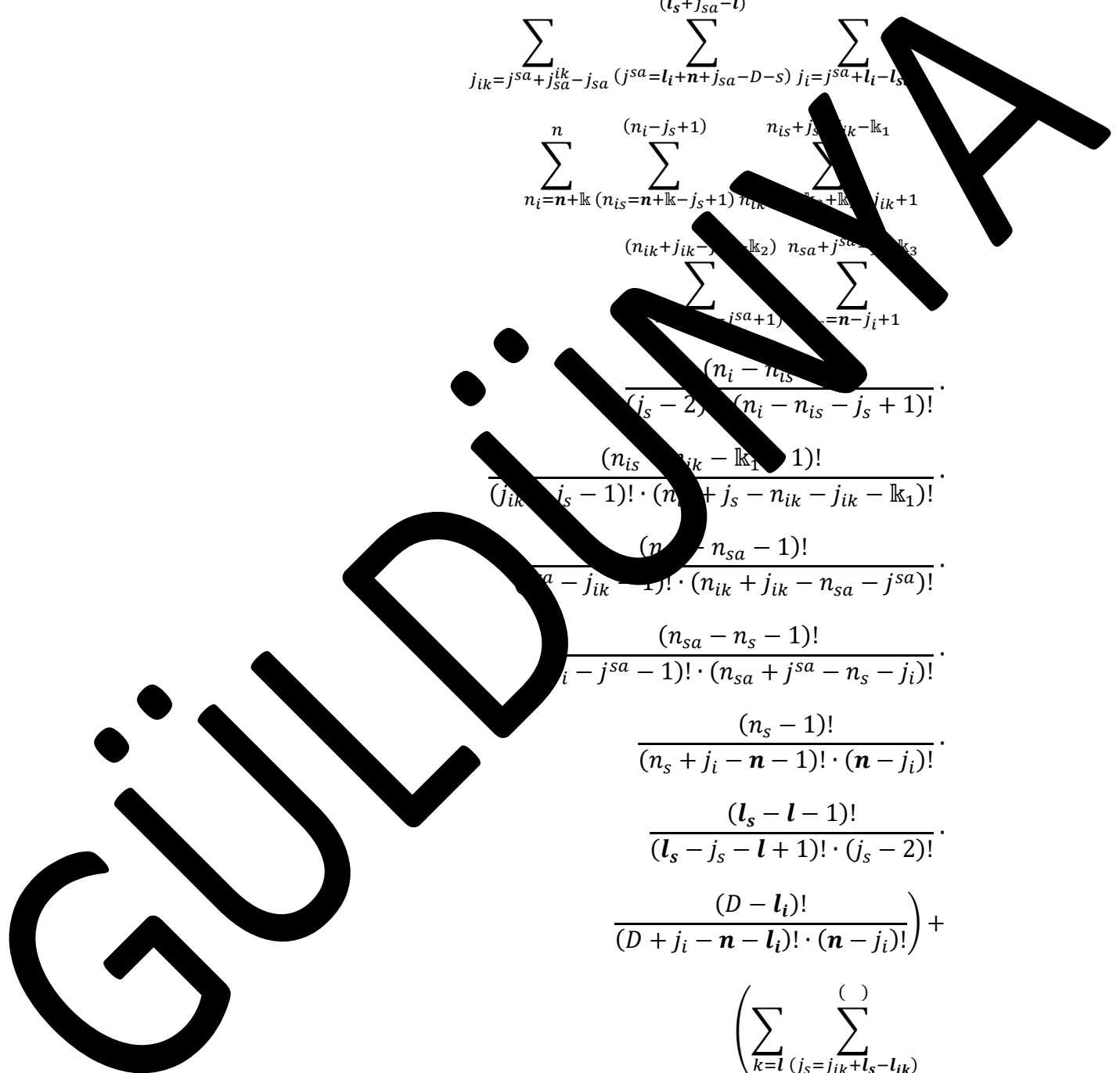
$$\frac{\binom{(n_s-1)}{\quad}}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{\binom{(l_s-l-1)}{\quad}}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{\binom{(D-l_i)}{\quad}}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \binom{(l_s+j_{sa}-l)}{\quad}$$



$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - \mathbb{k}_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{j_s = j_{i_k} + l_s - l_{i_k}}^{l_s + j_{s_a}^{i_k} - l} \sum_{j_{i_k} = l_s + n + j_{s_a}^{i_k} - D - 1}^{(l_i + j_{s_a} - l - s + 1)} \sum_{(j^{s_a} = l_s + j_{s_a} - l + 1)} \sum_{j_i = j^{s_a} + l_i - l_{s_a}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa}^{ik} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{ik}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = j_{sa}^{ik} \wedge$$

$$\mathbb{k}_2 = j_{sa}^{ik} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{z^S}^{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j^{sa} + 1)!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{j_{ik}=j^{sa}-l_{sa}}^{j^{sa}-l-s} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{j^{sa}+l-s} \sum_{j_s=j^{sa}+l-s}^{j^{sa}+l-s} \sum_{j_{sa}=j^{sa}+l-s}^{j^{sa}+l-s}$$

$$\sum_{n_{ik}=n+l_{sa}-j_{ik}+1}^{n_{ik}=n+l_{sa}-j_{ik}+1} \sum_{n_{is}=n+l_{sa}-j_s+1}^{n_{is}=n+l_{sa}-j_s+1} \sum_{n_{sa}=n+l_{sa}-j_{sa}+1}^{n_{sa}=n+l_{sa}-j_{sa}+1}$$

$$\sum_{(n_{sa}=n+l_{sa}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZ

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa}$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^{\mathcal{S}_{j_s, j_{ik}, j_{sa}^{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(l_i + j_{sa} - l - s + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{ik} + 1)!} \cdot \frac{(D)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_s + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 \leq j_{sa}^{ik} - 1 \wedge$$

$$s; \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \binom{(l_s + j_{sa} - l)}{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{\binom{D}{k}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}+1}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=0}^{j^{sa} - j_{sa} - l_{sa} - l_i + j_{sa} - D - s - 1} \sum_{\substack{j_s = j_{ik} + l_s - l_{ik} \\ = l_{ik} + n - D}} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}+l_s+l_{sa}-n-D)}^{l_s+j_{sa}^{ik}-l} \sum_{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})}^{(l_{sa}-l+1)} \sum_{(j_i+j_{sa}-j_{sa}-s)}^{l_i-l+1}$$

$$\sum_{(n_i=n+k)}^n \sum_{(n_{is}=n+l_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+k-k_1}^{n_{is}+j_{sa}^{ik}-k-k_1} \sum_{j_{ik}+1} \\
 & \sum_{(n_{ik}+j_{ik}-j_{sa}-k_2)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j_{sa}^{ik}-k-k_3} \sum_{=n-j_i+1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(l_s + j_{sa} - l)} \sum_{j_{ik}=j_{sa}+k}^{(n + j_{sa} - l)} \sum_{j_i=s-j_{sa}}^{(n + j_{sa} - l)} \sum_{i=n+k}^n \sum_{n_{is}=n+k}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik} + j_{sa} - k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa} + j_{sa} - j_i - k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

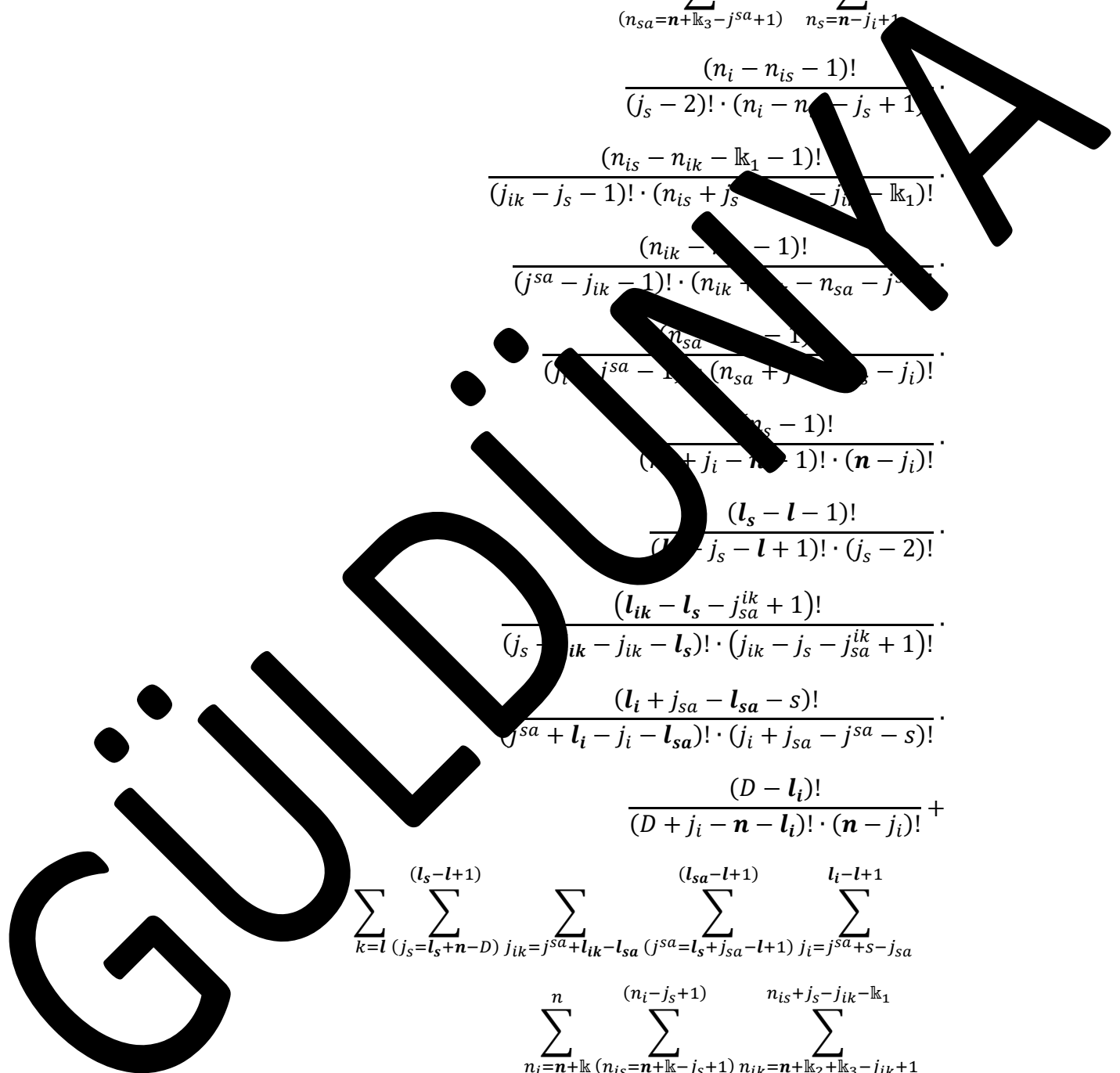
$$\begin{aligned}
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}+j^{sa}-l_{k_1}-j_{ik}+1)} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_s+1)}^{(n_{sa}=n+l_{k_3}-j_s+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}=n+l_{k_3}-j_s+1)} \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \\
 & \frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j^{sa}-l_{k_1}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

GÜLDÜZYA

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j^{sa} - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\ \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{\substack{(l_s-l+1) \\ (j_s=l_s+n-D)}} \sum_{\substack{j_{ik}=j^{sa}+l_{ik}-l_{sa} \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - j_{sa} - l_{sa} - s)!}{(j_s + l_i - j_i - l_s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZMAY

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s - 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_3 \wedge$

$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 5$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}^k-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{j_s=l_s}^{l_s-l+1} \sum_{j_{ik}=D}^{l_{ik}-l+1} \sum_{j_{sa}=D}^{l_{sa}-l+1} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_{is}=n+l_k}^{n+l_k} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDENWA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_i + n + j_{sa} - j_s)} \sum_{j_i = j_{sa} + l_i - l_s} \sum_{(l_s + j_{sa} - l)}$$

$$\sum_{n_i = n + k_1}^n \sum_{(j_s = n + k_2 - j_{sa} - j_{sa}^{ik})} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1} \sum_{(n_{is} = j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n - j_{sa} - j_{sa}^{ik} + 1)} \sum_{n_s = n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZ

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} &= \sum_{l=1}^{l+1} \sum_{j_s=l_s+n-D}^{j_s} \\ &= \sum_{j_{ik}=l_{ik}}^{l_{ik}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{a-l+1} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\ &= \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &= \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &= \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &= \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &= \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - 1 \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \binom{()}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - j_i)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(D - \dots)}{(D + j_i - \dots - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \right) \\
 & \sum_{i_{ik} = l_i + n + \dots - D - s}^{l_{sa} + j_s - \dots - j_{sa} + 1} \sum_{(j_i = j^{sa} + s - j_{sa} + 1)}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜMBA

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{j_i=l_i+n}^{l_i+n+j_{sa}^{ik}-D-j_{sa}} \sum_{j_{sa}=j_{sa}-l_{ik}}^{j_{sa}-l_{ik}} \sum_{j_i=l_i+n}^{j_i+l_i+n} \\
 & \sum_{n_i=n}^n \sum_{n_{is}=n+l_{k_1}+1}^{n-l_{k_1}} \sum_{n_{ik}=n+l_{k_2}}^{n-l_{k_2}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n-l_{k_3}} \sum_{n_s=n-j_i+1}^{n-l_{k_1}-j_{ik}+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z \rightarrow j_{sa}^{ik}, j_{sa}^{sa}, j_i$$

$$\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{ik}=n+j_{sa}^{ik}-D-j_{sa}} \sum_{j_i=l_i+l-n-D} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=l_i+n-D}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{(\quad)}{\quad} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} +$$

$$\sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{j_{sa}=j_{sa}-D-s}^{j_{sa}-D-s} \sum_{j_i=j^{sa}+s-j_{sa}+1}^{(j^{sa}+s-j_{sa}+1)+l_{sa}-l_{ik}} \sum_{l_i=l_i-l+1}^{(j^{sa}+s-j_{sa}+1)+l_{sa}-l_{ik}}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDENMÄ

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\binom{()}{j_{ik}=l_{ik}+n-D}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{\binom{()}{j_i=l_i+n-l_{ik}}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{()}{n_{is}=n+k-j_s+1}}^{(n_i-j_s+1)} \sum_{\binom{()}{n_{ik}=n_{is}+k-j_{ik}+1}}^{n_{is}+j_{sa}^{ik}-k-k_1} \\
 & \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{\binom{()}{j_i=n-j_i+1}}^{n_{sa}+j_{sa}^{ik}-k-k_3} \\
 & \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z = \sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}} \sum_{j_i = j_{sa} + l_{ik} - l_{sa}} \sum_{j_i = l_{ik} + n + s - D - j_{sa}^{ik}} \sum_{j_i = l_{ik} + n + s - D - j_{sa}^{ik}} \sum_{n_{is} = n + k - j_s + 1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1} \sum_{n_{sa} = n + k_3 - j_{sa} + 1} \sum_{n_s = n - j_i + 1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=n+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_s+n+s-D-1}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_{sa} + s - l - j_{sa} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{sa}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{sa} = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = n - j_i > 0 \wedge$$

$$j_i = j_{sa}^l - j_{sa}^{ik} < j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^l, \mathbb{k}_3, \dots\}$$

$$s \geq 5, l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_s}, k_2, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - n - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+l_k} \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}-1} \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{(n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-1)}{n_s=j_i+1}} \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq \dots < n \wedge l_s > D \dots n+1$

$\dots \leq j_s \leq \dots - j_{sa}^{ik} + 1 \dots j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} = \dots \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \geq n < \dots \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{ik}-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+l_{sa}-l_{sa})}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{()} (j_s = j_{ik} + l_s - l_{ik}) \\ & \sum_{j_{ik}=j^{sa} - l_{sa} (j^{sa}=j_i - a - l_i)}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_s+s-l} \\ & \sum_{n_i=j_i+\mathbb{k} (n_{is}=n+\mathbb{k}-j_s+1)}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i=1}^{n-s} \sum_{j_s=j_i+l_s-l_{ik}}^{n-j_i} \sum_{j_{sa}^{ik}=j_i+l_{sa}-l_i}^{n-j_i} \sum_{j_i=l_s+n+s-D-1}^{l_i-l+1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + n + s - D - 1}^{l_{sa} + s - l - j_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbb{k} = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{j_i=l_s+n+s-D-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_s}, k_2, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \leq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_s = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - n - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j^{sa}-j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2) \cdot (n_i-n_{is}-j_i+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1) \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots < n \wedge l_s > D \dots n+1 \wedge$

$Z \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_i=j^{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{is}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s - j_{ik} + l_s - l_{ik})}^{(j_{sa} - j_{ik} - l_{sa})} \sum_{(j_{ik} = j_{sa} + l_{ik} - l_{sa})}^{(j_{sa} = l_i + n_i - D - s)} \sum_{(j_i = j_{sa} + l_{sa})}^{(n_i - j_s + 1)} \sum_{(n_i = n_i + j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{ik} - j_{ik} - \mathbb{k}_1)}^{(n_{ik} - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} + j_{ik} - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \sum_{(n_{sa} = n_{sa} - j_{sa} - \mathbb{k}_3)}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \sum_{(n_{sa} = n_{sa} - j_{sa} + 1)}^{(n_{sa} - j_{sa} + 1)} \sum_{(n_s = n - j_i + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(n_i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{(l_{sa}=j_{sa}-1)} \sum_{(l_{ik}=j_{sa}^{ik}-1)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_i=l_i+n_{is}-j_{ik}-1)} \sum_{(j_i=j^{sa}+l_i-l_{sa})} \sum_{(n_s+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{sa}+j_{sa}-j_i-\mathbb{k}_2)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZÜMÜYÜ

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}^{ik}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \\ &\sum_{(l_{sa}^{ik}-l)} \sum_{(j_{ik}=j^{sa}-l_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{(j_i=j^{sa}+l_i-l_{sa})} \\ &\sum_{(n_i=n+\mathbb{k})} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_s - l_i)!}{(D + l_s - n - l_i - j_i - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_s: z = 3 \wedge \mathbb{k}_s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = \dots > 0 \wedge$$

$$j_i = j_{sa}^l - \dots - j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, \dots\}$$

$$s \geq 5, \dots = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \dots = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j^{sa}=l_{sa}+n-D)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq 1 \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} - j_s \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$j_s \geq n - l_s \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_{sa}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_1}^{(n_{is}+j_{ik}-\mathbb{k}_1)} \sum_{j_{ik}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{j^{sa}+1}^{(n_{sa}+j^{sa}-\mathbb{k}_3)} \sum_{n-j_i+1}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_i - j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^i + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j_{sa} = l_{ik} + n + j_{sa}^{ik} - j_{sa}^i)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_i=0}^n \sum_{(n_{is}=n + j_{sa}^i - j_{ik} + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik}=n - j_{ik} + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa}=n - j_{sa} + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_s=n - j_i + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)}$$

$$\frac{(n_i - n_{is} - 1)!}{2! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa}^i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^i - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa}^i - 1)! \cdot (n_{sa} + j_{sa}^i - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

GÜLDÜNKYA

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}-1} \sum_{j_{sa}^{ik}=j_{sa}-1} \sum_{j_{sa}^s=j_{sa}^{ik}-1} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{j_{sa}=l_s+n_{is}-D-1} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n_{is}+1}^{n_{is}+1} \sum_{n_{ik}=n_{ik_2}+1}^{n_{ik_2}+1} \sum_{n_{sa}=n_{sa_3}-1}^{n_{sa_3}-1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{\binom{()}{l+1}} \sum_{n_i=n+k}^{\binom{()}{l+1}} \sum_{n_{is}=n+k-j_s+1}^{\binom{()}{l+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{\binom{()}{l+1}} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{\binom{()}{l+1}} \sum_{n_s=n-j_i+1}^{\binom{()}{l+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j_{sa}^{ik} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - l)!}{(D + l - n - l_i - 1)! (l_i - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s = j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \mathbb{k}_3, j_{sa}^{ik}\}$

$s \geq 5, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots \wedge l_s > D \dots \wedge n+1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^l\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+l_i-l_s}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{j_{ik}+1}^{n_{ik}+j_{ik}-\mathbb{k}_2} \sum_{j^{sa}+1}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{=n-j_i+1}^{(\quad)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} (j_{sa}=j_{ik}-l_{ik}) j_i=j_{sa}^{ik}-j_{sa}$$

$$\sum_{n_i=0}^n (n_{is}=n_{ik}+1) n_{ik}=j_{ik}+1$$

$$(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2) n_{sa}+j_{sa}-j_i-\mathbb{k}_3$$

$$(n_{sa}=n_{ik}-j_{sa}+1) n_s=n-j_i+1$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} (j^{sa}=j_{ik}+l_s-l_{ik}) j_i=j^{sa}+l_i-l_{sa}$$

$$\sum_{n_i=n}^n (n_i-n_{is}-1) \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_s+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZÜNLYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=l_{sa}+n}^{\binom{()}{}} \sum_{j_{sa}^{ik}-D-j_{sa}}^{\binom{()}{}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{\binom{()}{}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{\binom{()}{}}$$

$$\sum_{n_i=n+\mathbb{k}}^{\binom{()}{}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{\binom{()}{}} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{\binom{()}{}} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{\binom{()}{}}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{\binom{()}{}} \sum_{n_s=n-j_i+1}^{\binom{()}{}} \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{\binom{()}{}} \sum_{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{\binom{()}{}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{k-l+1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_s$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \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}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} = j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} = j_s - j_{sa} \wedge n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s - j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = s > 0 \wedge$$

$$j_s = j_{sa}^l - j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, \dots\}$$

$$s \geq 5, l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_s}, k_2, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - n - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_2}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{ik}+1)!(n_{is}+j_{ik}-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \langle n \wedge l_s \rangle D = n + 1$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$n \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{sa}+j_s-j_{ik}-l_{k_2})} \sum_{n_s=n-j_i}^{(n_{sa}+j_s-j_{ik}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(\cdot)} \sum_{i=j_{sa}-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_{is}-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}+l_{ik}-l_s}^{n} \sum_{j_{sa}+l_{sa}-l_{ik}}^{(j_{sa}-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l-s+2)} \\ & \sum_{n_i=n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{s_1}, j_{sa}^{s_2}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \leq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\sum_{(n_{sa}=n+k_3)}^{(n_{sa}=n+k_3)} \sum_{(n_s=n-j_i)}^{(n_s=n-j_i)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-l-s+2)} \sum_{(j_{ik}=j_s+l_{ik}-l_s)}^{(j_{sa}=j_{ik}+k_1)} \sum_{(j_i=j_{sa}+k_2-k_3)}^{(j_i=l_{sa})} \sum_{(n_i=n+k_1)}^n \sum_{(n_{is}=n_{ik}+j_s-1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{sa}+k_2-k_3-j_{ik}+1)}^{(n_{is}+j_s-1)} \sum_{(n_{sa}=n_{ik}-j_{sa}-k_3)}^{(n_{sa}-j_i-k_3)} \sum_{(n_s=n_{ik}-j_{sa}+1)}^{(n_s=n_{ik}-j_{sa}+1)} \sum_{(n_s=n_{ik}-j_{sa}+1)}^{(n_s=n_{ik}-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

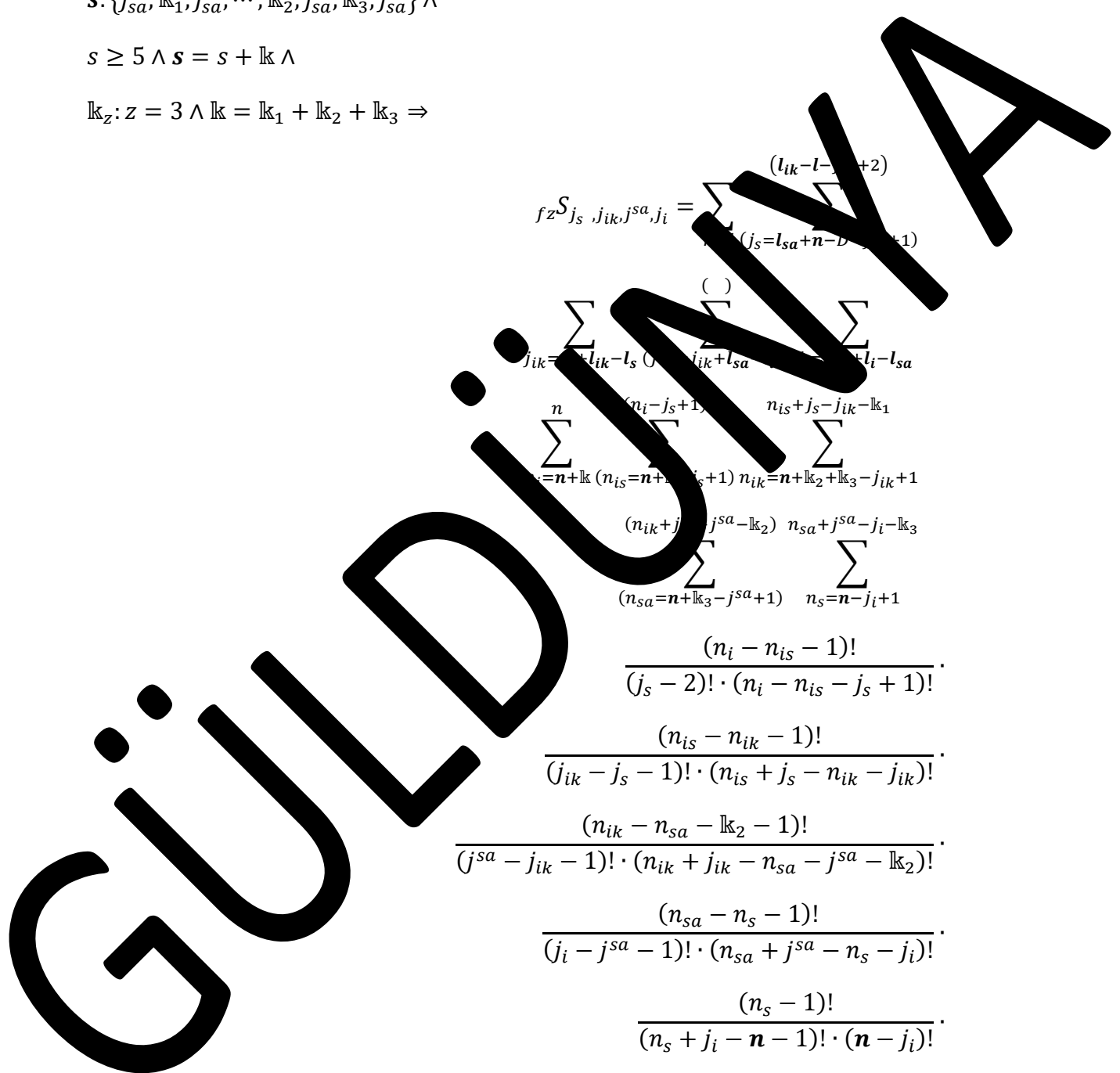
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \frac{(l_{ik} - l_s + 2)}{(j_s = l_{sa} + n - D + 1)} \cdot \sum_{j_{ik} = l_{ik} - l_s}^{()} \sum_{j_{sa} = j_{sa} - 1}^{()} \sum_{j_i = l_i - l_{sa}}^{()} \frac{(n_i - j_s + 1)}{\sum_{n_i = n + k}^{()} (n_{is} = n + k_1 + j_s + 1)} \cdot \frac{(n_{is} + j_s - j_{ik} - k_1)}{\sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{()}} \cdot \frac{(n_{ik} + j_{sa} - j_{sa} - k_2)}{\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{()}} \cdot \frac{(n_{sa} + j_{sa} - j_i - k_3)}{\sum_{n_s = n - j_i + 1}^{()}} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_i - l - s + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)} f z^D j_s^{j_{sa}^{ik}}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, j_{sa}^{i_1}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z: \mathbb{k} = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$z \bullet j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_k - j_{sa} - 1 = l_s \wedge l_{sa} \bullet j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, j_{sa}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \leq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \leq l_s \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l} \\ \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\ \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{ik}-j_i-l_{k_3})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)} \sum_{n_s=n-j_i}^{(n_i-n_{k_1}-1)!} \\ \frac{(j_s-2)! \cdot (n_{is}-j_s+1)!}{(n_{ik}-n_{k_1}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\ \frac{(n_{ik}-n_s-l_{k_2}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \\ \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\ \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\ \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\ \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n \wedge l_s > n-1 \wedge$$

$$2 \leq l \leq D \wedge l_s + s - n - l_i \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1) \quad l_{sa}+s-l-j_{sa}+1} \sum_{j_i=l_i+n-D} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1) \quad n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \quad n_{sa}+j^{sa}-j_i} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1) \quad n_s=n-j_i+1} \frac{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j^{sa}-n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1) \quad l_i-l+1} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_{sa}+s-l-j_{sa}+2} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1) \quad n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \quad n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1) \quad n_s=n-j_i+1}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - j_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = 1 + \mathbb{k} \wedge$$

$$s = 1 + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{l_i-l+1} \sum_{j_i=l_i+n-D} \\
& \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
& \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_i + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+j_{sa})}^{(\cdot)} \sum_{(i=l_i-D)}^{(\cdot)} \frac{l_{ik} - l - j_{sa}^{ik} + 1}{(j_s - l)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \frac{(n_{is} - n_{ik} - 1)!}{(j_s - l)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

GÜLDÜŞÜMÜYA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^s \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_s=n-j_i+1}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - j_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = 1 + \mathbb{k} \wedge$$

$$I = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i-l+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s-j_i+1}^{n_{sa}+j^{sa}-j_i-l} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i \leq D - l_i + 1 \wedge$$

$$2 \leq l_i \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l_s-l_{ik}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+l_{sa})} \binom{()}{l_{ik}-l-j_{sa}+1} \sum_{i=l_i} \binom{()}{l_i-D} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_{is}+j_s-j_{ik}}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}^{n_{ik}=n_{sa}+k_2-j_{ik}+1} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{j_i=k_3}^{j_i-k_3} \sum_{(n_{sa}+k_3-j_{sa}-1)}^{(n_{sa}+k_3-j_{sa}-1)} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Big) + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l_s-l_{ik}} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \binom{(\quad)}{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_i < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_2 + \mathbb{k}_3 \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i \geq D - l + 1 \wedge$$

$$2 \leq l_i \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

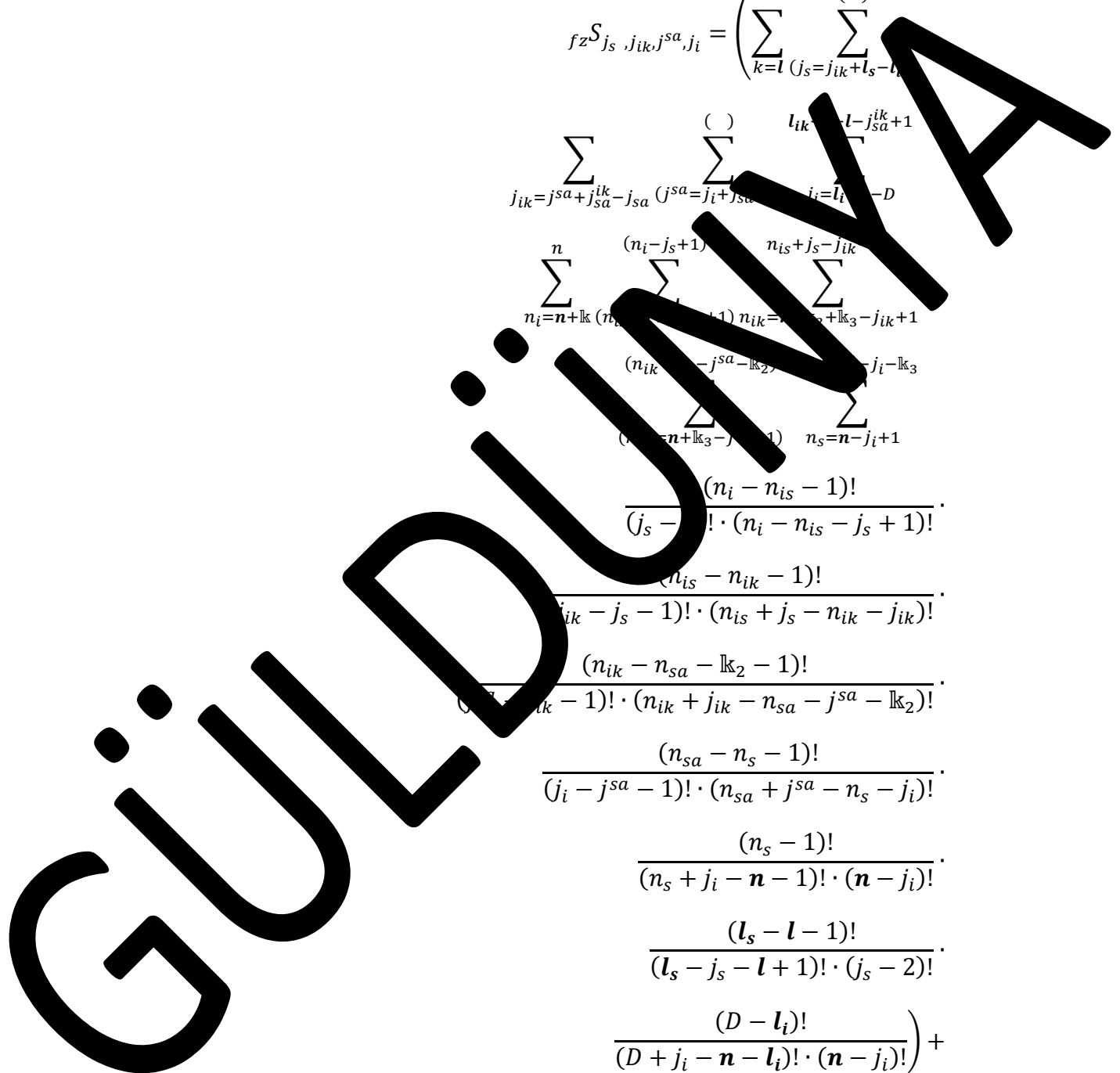
$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+j_{sa}^{ik}-D)}^{()} \sum_{l_{ik}=l-j_{sa}^{ik}+1}^{()} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_{is}+j_s-j_{ik}}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}^{(n_{ik}=n_{sa}+k_2-j_{ik}+1)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_{ik}-j_i-k_3)}^{(n_{ik}-j_i-k_3)} \sum_{(n_{sa}+k_3-j_{sa}-1)}^{(n_{sa}+k_3-j_{sa}-1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{\substack{(j_s=j_{ik}+l_s-l_{ik}) \\ (j^{sa}+j_{sa}^{lk}-j_{sa}-1)}} \sum_{\substack{(j_{ik}=l_{ik}+n-D) \\ (j^{sa}=j_i+j_{sa}-s)}} \sum_{\substack{(l_{ik}+s-l-j_{sa}^{lk}+1) \\ (j_i=l_i+n-D)}} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_s+1)}} \sum_{\substack{(n_{is}+j_s-j_{ik}-k_1) \\ (n_{ik}=n+k_2+k_3-j_{ik}+1)}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZÜMÜSÜ

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{ik} - j_{sa} - l_{sa})!} \cdot \frac{(l_i - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + l_i - s \wedge j_{sa} + s - j_s \leq j_i \leq j_s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq s, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq j_s \leq D + l_s + s - n - l_i \wedge$$

$$j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j^{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_i-j_i-k_3)!}{(n_{sa}=n+k_3-j_{ik}+1)! \cdot (n_s=n-j_i)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!} \\
 &\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \Big) + \\
 &\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j^{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j^{sa}-D-1)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{\substack{(j_s=j_{ik}+l_s-l_{ik}) \\ (j_{ik}=j^{sa}+l_{ik}-l_{sa})}} \sum_{\substack{(l_s+j_{sa}-l) \\ (j^{sa}=l_s+\mathbf{n}+j_{sa}-D-1)}} \sum_{\substack{l_i-l+1 \\ j_i=l_s+s-l+1}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}
 \end{aligned}$$

GÜLDÜŞMÜŞA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_i)!}{(D + j_s - n - l_i)! \cdot (j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}^{ik} + 1$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s > 5 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \dots + \mathbb{k}_2 + \dots \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)}^{l_i - l + 1} \sum_{j_i = l_i + n - D}^{n} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - 1)!}{(j^{sa} + l_i - j_s - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq l \leq D + l_s + s - n - 1$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ls} - 1 \leq j_{ik} \leq j_s^a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{ik} \leq j_s^a \wedge j_i + j_{sa} - s \wedge j_s^a - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^a, j_{sa}^{ik}, \dots, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$s = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +$$

$$\left(\sum_{k=l} \binom{()}{j_s=j_{ik}+l_s-l_{ik}} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{()}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = n + l_s - l_{ik})}^{()} \sum_{j_{ik} = n + j^{sa} - D - 1}^{l_s + l - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + s - l + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZ

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_i - j_{sa} + 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_s^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^{i}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(j_i - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$s \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i)}{n_s=n-j_i+1}} \\
 & \frac{\binom{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!}}{\binom{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}} \\
 & \frac{\binom{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!}}{\binom{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}} \\
 & \frac{\binom{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}}{\binom{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}} \\
 & \left. \frac{\binom{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{(j_{ik}-j_{sa}^{ik})}{j_s=l_s+n-D}} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-k_3)}{n_s=n-j_i+1}}
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{(l_s)} \sum_{j^{sa}+l_{ik}-l_{sa}}^{(l_s)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_i - j_{sa} + 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_s^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i - l + 1)} \sum_{j_{ik} = j_{sa}^{ik} + l_{ik} - l_{sa}}^{(j^{sa} = j_i + l_{sa} - l_i)} \sum_{j_i = l_i + n - D}^{(l_i - l + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\sum_{j_i=l_i+n-D}^{l_s+s-l}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +
 \end{aligned}$$

$$\left(\sum_{k=l}^{\quad} \binom{(\quad)}{\sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\quad}} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(j_i+j_{sa}-s-1)}{\sum_{j_i=l_i+n-D}^{l_s+s-l}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i - l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{(j_s=j_{ik}+l_s-l)}^{j_s^{ik}-l} \sum_{(l_{sa}=l_s+n)}^{j_{sa}^{ik}-D-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_{sa}-l+1} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l)!}{(n - l)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{\binom{j_s = j_{ik} + l_{sa} - 1}} \sum_{\binom{j^{sa} = j_{ik} - j_{sa} - 1}} \sum_{\binom{j_s = l_i + n - D}} \sum_{\binom{j_s = l_i + n - D}}$$

$$\sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_i - j_s - 1} \sum_{n_{is} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n < n \wedge \mathbb{k} = \mathbb{k} > 0$

$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{sa}^{ik}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$

$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\begin{aligned}
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{i_s} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{i_k} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = \mathbf{n} + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{ik} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = \mathbf{n} - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{ik})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{s_a} - j^{s_a} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik} - j_{s_a}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{l_s + s - l} \right) \\
 & \sum_{j_{ik} = j^{s_a} + l_{i_k} - l_{s_a}}^{(j_i + j_{s_a} - s - 1)} \sum_{(j^{s_a} = l_{s_a} + n - D)}^{l_s + s - l} \sum_{j_i = l_i + n - D}^{l_s + s - l} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{i_s} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{i_k} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = \mathbf{n} + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{ik} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = \mathbf{n} - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j^{sa} - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{l_s} \sum_{j^{sa}+l_{ik}-l_{sa}}^{l_{sa}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

DRAFT

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j^{sa} = j_i - l_i)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(l_i + n - D)}^{(l_s + s - l)}$$

$$\sum_{(i = n + k)}^n \sum_{(n_{is} = n + k_1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_{is} + j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j^{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_i}^{s, j_i} &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \\ &\sum_{k=j^{sa} + l_{ik} - l_{sa}}^{(l_{sa} - l + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_i + n - D}^{l_i - l + 1} \\ &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\ &\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i)!}{(D + l_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_3 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \wedge$$

$$f_z^{\mathcal{S}}_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_{is} + j_{ik} - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^k-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDENMYA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - l + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l_s=0}^{(l_s-1)} \sum_{j_{ik}=0}^{(l_{ik}-l+1)} \sum_{j_{sa}=0}^{(l_{sa}+j_{sa}^{ik}-l_{ik}-1)} \sum_{j_i=0}^{(l_i-l+1)} \\
 & \sum_{n_{is}=n+\mathbb{k}_3-j_s+1}^n \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_{sa} - l_i)} \sum_{j_i = l_i + n - j_{sa} - j_{sa}^{ik} - j_{sa}}$$

$$\sum_{n_i = n + l_{ik} - j_{sa} - j_{sa}^{ik} - j_{sa}}^n \sum_{n_{is} = n + l_{ik} - j_{sa} - j_{sa}^{ik} - j_{sa} - j_{ik} - l_{k_1}}^{n_{is} = j_{ik} - l_{k_1}}$$

$$\sum_{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa} - j_{ik} - l_{k_2} - l_{k_3})} \sum_{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa} - j_{ik} - l_{k_2} - l_{k_3} - j_{ik} + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - l_{k_2})!}$$

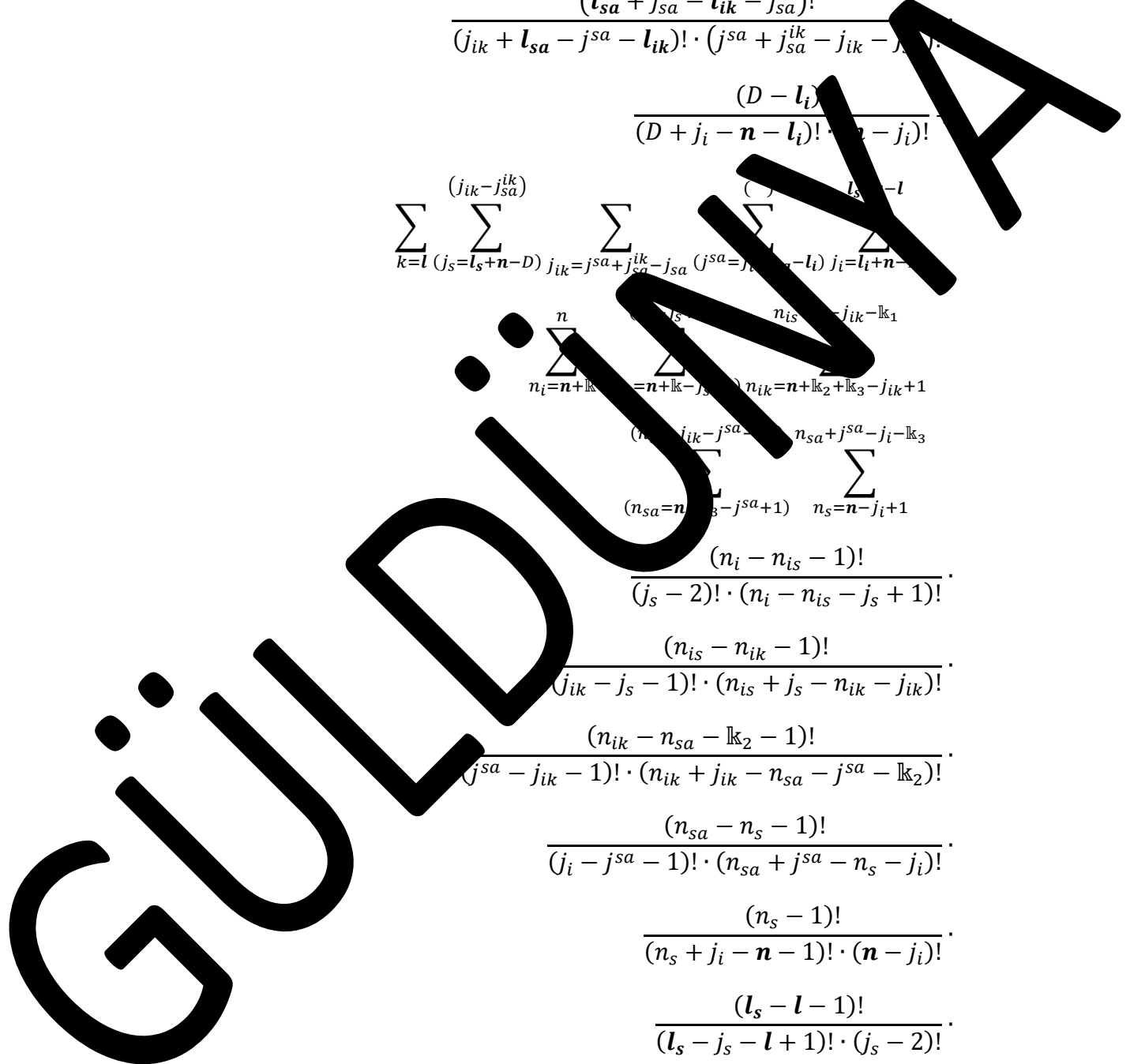
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS} j_s, j_i, j_{sa}, j_i &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(D - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \cdot 5 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}} \sum_{(l_{sa} - l + 1)}^{(j_{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j_{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{j_i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=n+k} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}=j^{sa}+l_{ik})} \sum_{(j^{sa}=l_s)} \sum_{(n-D)} \sum_{(j_i=l_i+n-D)} \sum_{(n+j^{sa}-l)} \sum_{(l+1)}$$

$$\sum_{(n_i=n)} \sum_{(n_i=j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k} \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)} \binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} \right) + \\
 & \sum_{j_{ik}=j} \sum_{n_{ik}=l_{sa}} \sum_{(j^{sa}=l_i + (j^{sa}-D-s))} \sum_{(j_i=j^{sa}+s-j_{sa}+1)} \sum_{(n_i-j_s)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{)}{}} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})} \sum_{l_i = l_i + n - \dots}^{l_i - l + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = \dots}^{n_{is} + j_s - k - k_1} \sum_{j_{ik} + 1} \\
 & \sum_{(n_{ik} + j_{ik} - \dots)}^{(n_{ik} + j_{ik} - \dots)} \sum_{(j^{sa} + 1)}^{n_{sa} + j^{sa} - \dots} \sum_{= n - j_i + 1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1) \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - \dots - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

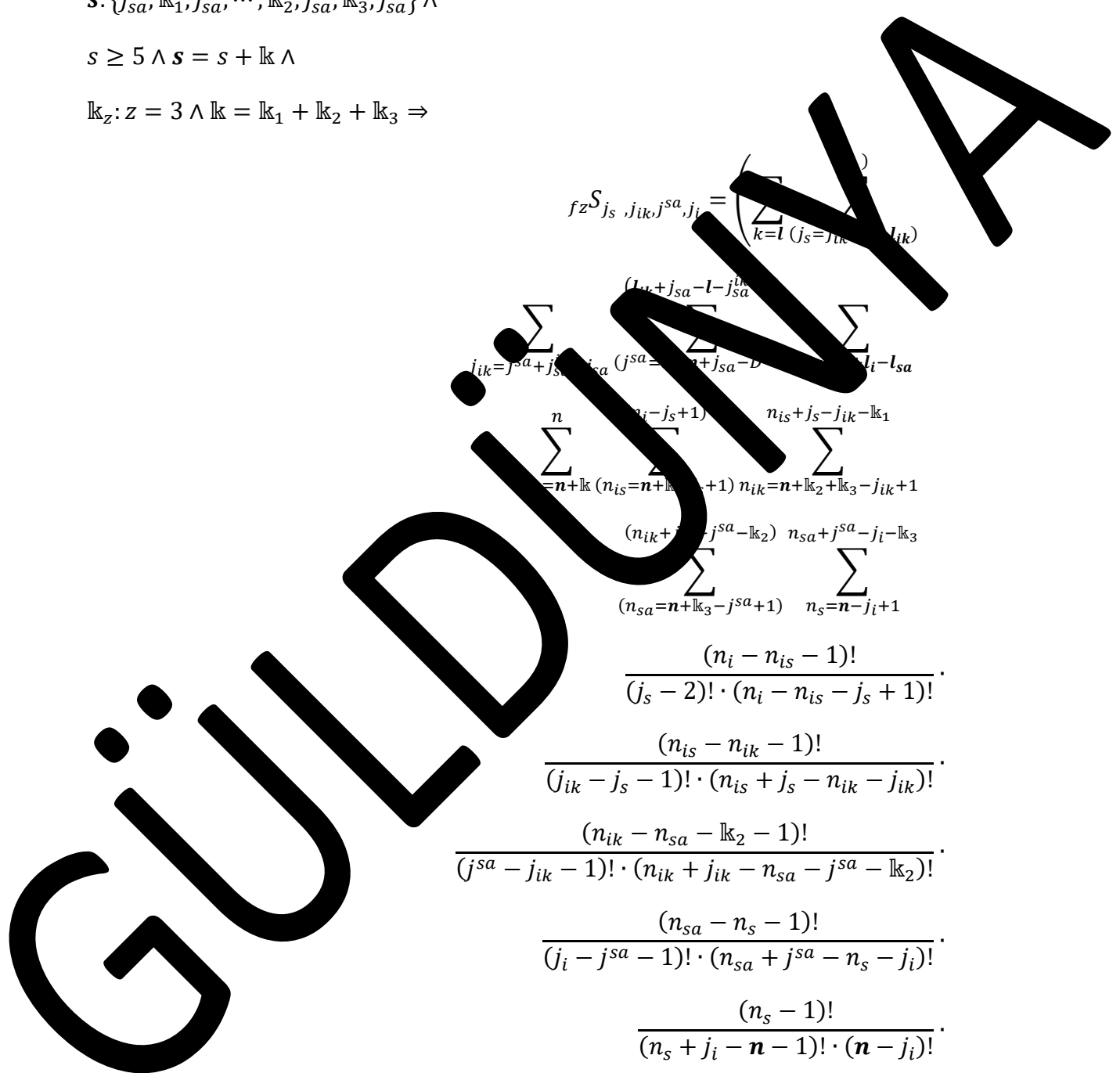
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \binom{l_s + j_{sa} - l - j_{sa}^{ik}}{j_s - j_{ik}} \binom{l_i - l_{sa}}{j_{sa} - j_{ik} - 1} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{n} \sum_{j_{sa}=j_{sa}^{ik}+j_{sa}-D}^{n} \sum_{l_i=l_{sa}}^{n} \sum_{n_{is}=n+k}^{n} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n} \sum_{n_s=n-j_i+1}^{n} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)^+$$



$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i}^{(j_{sa}^{ik}-j_{sa}-1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j_{ik}=n_{ik}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})}$$

$$\sum_{(n_{sa}=n+k_3-j_s+1)}^{(n_{sa}+j_s-j_{ik}-k_1)} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

GÜLDÜZÜMÜ

$$\frac{\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s - 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^l \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - \mathbb{k}_1, j_{sa}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(\quad)} \sum_{j_s=j_{ik}+l}^{(\quad)} \sum_{j_{sa}=j_{sa}^i-l_{ik}}^{(\quad)} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{n_i=n+j_{sa}-D}^{(n_i+j_{sa}-D)} \sum_{n_{is}=j_{sa}+s-j_{sa}}^{(n_{is}+s-j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

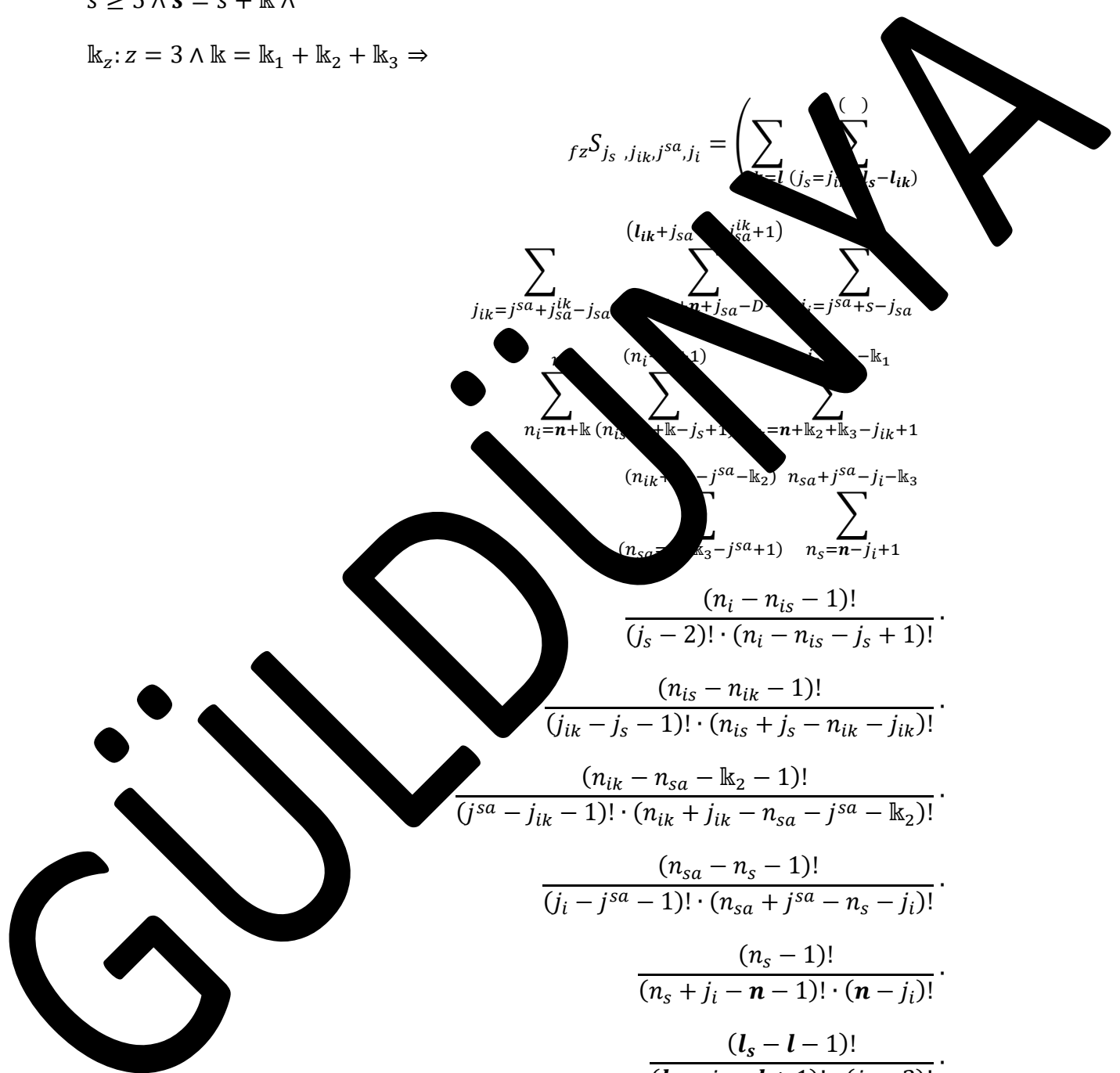
$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-k_1-1)! \cdot (n_{is}+j_s-j_{ik}-k_1-1)!}{(j_s-k_2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-k_1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{ik}-j_{ik}-n_{sa}-j_{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - n_{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^l \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-l+1} \sum_{(j^{s_a}=l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+2)}^{(l_{s_a}-l+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i-l+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{\binom{j^{sa} + j_{sa}^{ik} - 1}{j_{ik} = j_{ik} + l_s - l_{ik}}} \sum_{j_{ik} = j_{ik} + j_{sa}^{ik} - D - 1}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZ

AYLA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_i \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s - 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 5$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_i=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_i)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_{sa}=l_s+n_{is}-D-1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=n+1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

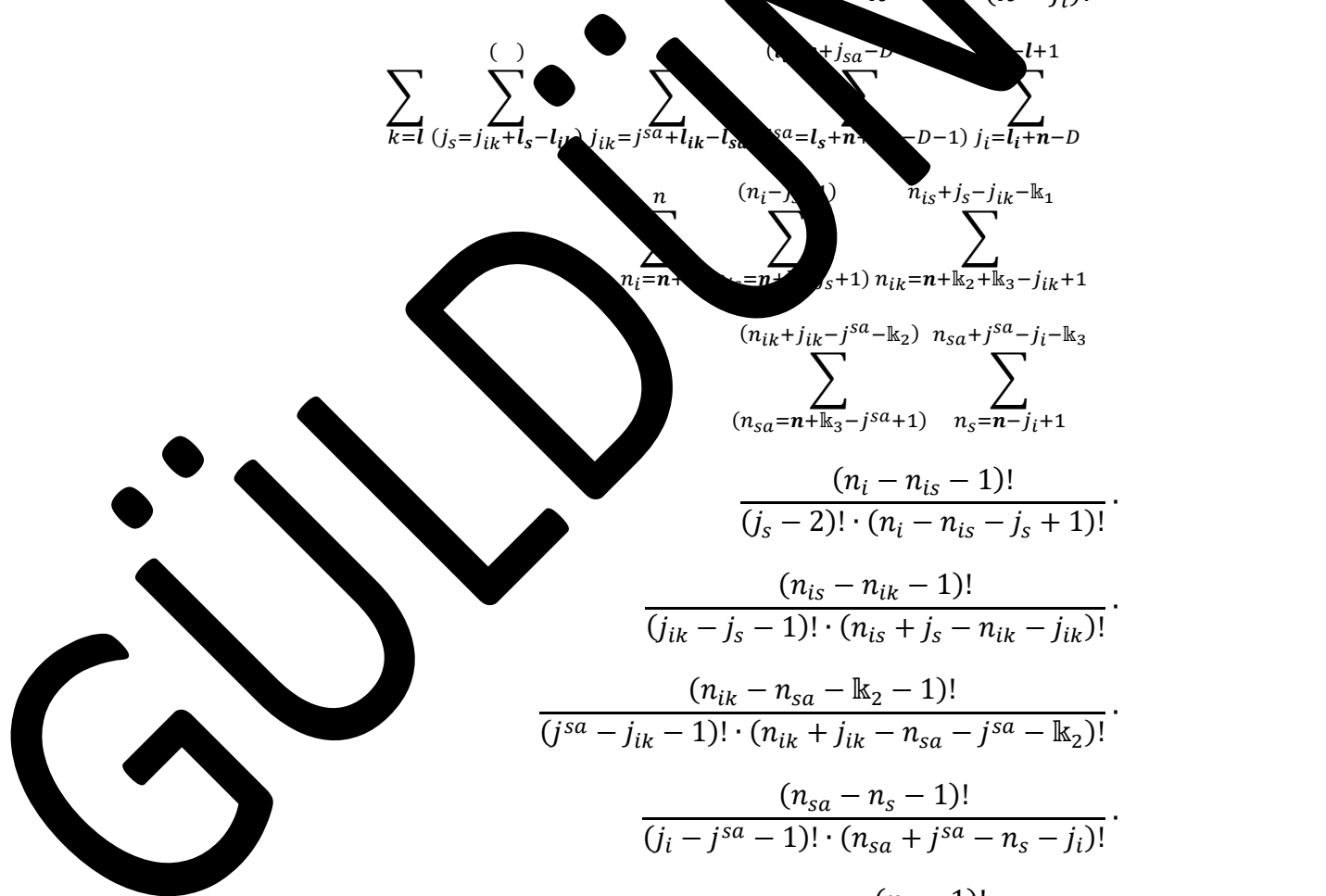
$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^l\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{i_k=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k} \sum_{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!} \right) + \\
 & \sum_{j_{ik}=l_s}^{j^{sa} + j_{sa} - j_{sa} - 1} \sum_{j_{sa}=j_{sa} - D - 1}^{(l_s + j_{sa} - D)} \sum_{j_i=j^{sa} + l_i - l_{sa}}^{(n - j_s)} \sum_{n+l_k}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{n+l_k}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_{ik}=n+l_k+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(l_i+j_{sa}-l-s+1)}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n-k}^{(n_{is}+j_s-n-k-k_1)} \\
 & \sum_{(n_{ik}+j_{ik}-j_s-k_2)}^{(n_{ik}+j_{ik}-j_s-k_2)} \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{sa}+j^{sa}-j_i)} \\
 & \sum_{(j_i-n+l_s-j_s+1)}^{()} \sum_{(n-j_i+1)}^{()} \\
 & \frac{(n_i - n_{is} - j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(n_i - n_{ik} - 1)!} \cdot \\
 & \frac{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}{(n_{sa} - k_2 - 1)!} \cdot \\
 & \frac{(j^{sa} - j_s - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}{(n_{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_i=n+1)} \sum_{(n_{is}=n+k_1+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDENMYA

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + l_{k_2} + l_{k_3} - j_s + 1)}^{(n_{is} + j_s - 1) - l_{k_1}}$$

$$\sum_{(n_{sa} = n_{k_3} - j^{sa} + 1)}^{(j_{ik} - j^{sa} - l_{k_2} - n_{sa} + j^{sa} - j_i - l_{k_3})} \sum_{j_i + 1}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - l - s + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_{sa} - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D > n < n \wedge l_s > n + 1$

$D + l_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_i+j_{sa}-l-s+1)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-lk_1)}^{(n_{is}+j_{ik}-lk_1)}$$

$$\sum_{(n_{ik}+j_{ik}-lk_2)}^{(n_{ik}+j_{ik}-lk_2)} \sum_{(n_{sa}+j_{sa}-lk_3)}^{(n_{sa}+j_{sa}-lk_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - lk_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(l_s+j_{sa}-l)} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{(j_{sa}^{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(j_{sa}^{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k_1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDENWA

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j_{sa}+1)! \cdot (n_s=n-j_i-k_2)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - k_2)!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s = j_{i_k} + l_s - l_{i_k})}^{()} \sum_{j_{i_k} = l_{i_k} + n - D}^{l_s + j_{s_a}^{i_k} - l} \sum_{(j^{s_a} = l_s + j_{s_a} - l + 1)}^{(l_{s_a} - l + 1)} \sum_{j_i = j^{s_a} + s - j_{s_a}}^{l_i - l + 1}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l=1}^{j^{sa} + j_s^{ik} - j^{sa} - 1} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{l_{ik} + n - D}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_2 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s - 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 5$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{i_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=\mathbf{n}+k}^n \sum_{(n_{is}=\mathbf{n}+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - 1)!}$$

$$\frac{(l_i + j_{sa} - l_s - 1)!}{(j^{sa} + l_i - j_s - 1)! \cdot (j_i + j_s - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=0}^{(j_{ik} - j_{sa})} \sum_{j_s=0}^{(n + j_{sa} - l_s - 1)} \sum_{j_{ik}=j_s}^{l_i - l + 1} \sum_{l_{sa}=0}^{n - D} \sum_{j_i=l_i + n - D}^{n - D}$$

$$\sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{n} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s=n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}$$

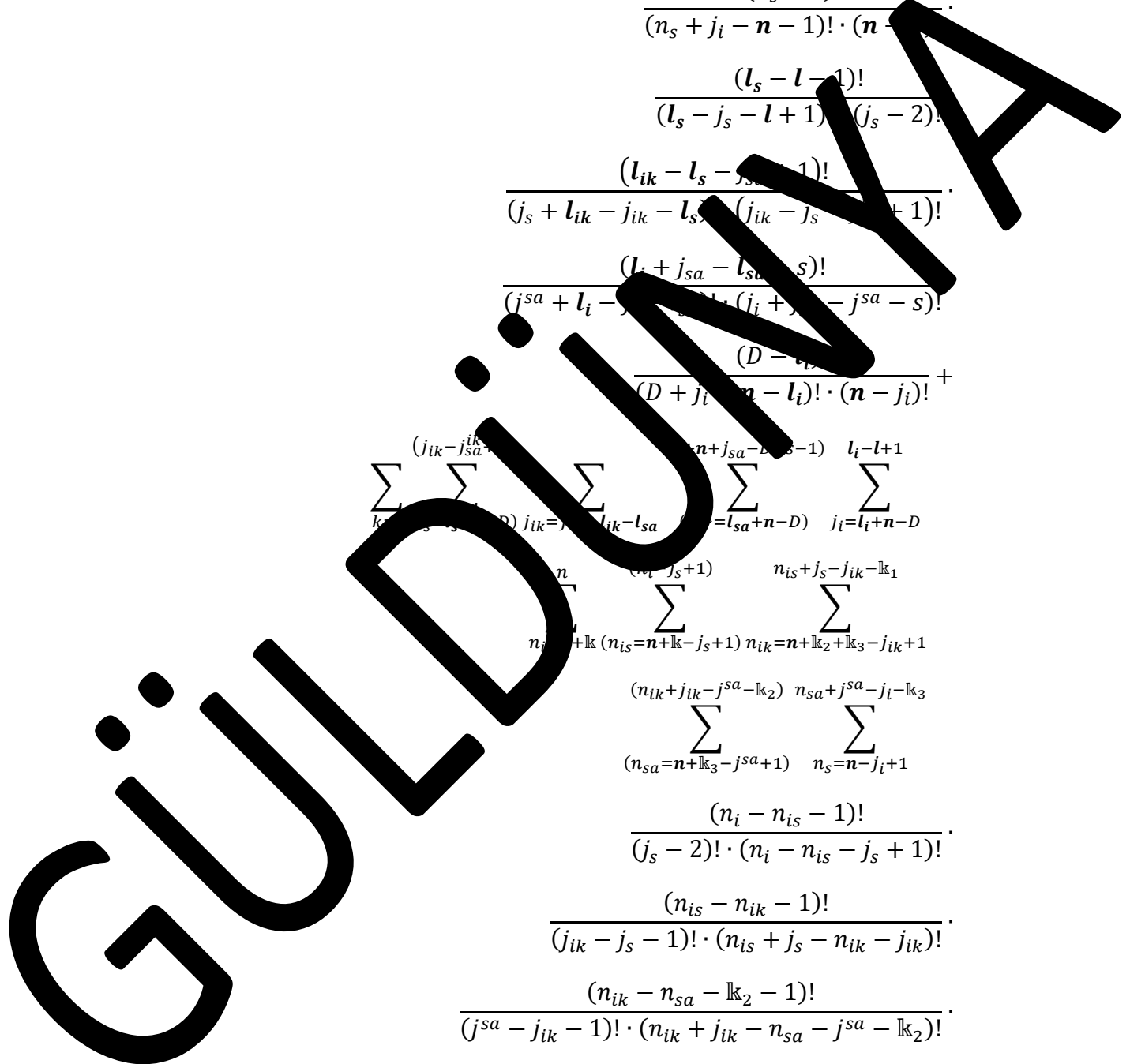
$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_s - l + 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{sa} - l_i - 1)} \sum_{(j^{sa} = l_s + j_s - l + 1)}^{(l_i - 1)} \sum_{j_i = j^{sa} + s - 1}^{(l_i - 1)} \\
 & \sum_{n_i = n - j_{ik} - 1}^n \sum_{(n_{is} = n + l_{ik} - 1)}^{(n - j_{ik} - l_{k_1})} \sum_{(n_{ik} = n + l_{k_2} - j_{ik} + 1)}^{(n - j_{ik} - l_{k_1})} \sum_{(n_{sa} = n - j_{ik} - 1)}^{(n_{sa} + j^{sa} - j_i - l_{k_3})} \sum_{(n_s = n - j_i + 1)}^{(n_s - j_i + 1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k - k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k}$$

$$\sum_{(n_{sa} = n + k - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i - k_3}^{n_{sa} + j_s - j_i - k_3}$$

$$\frac{(n_i - j_s - 1)!}{(n_i - j_s + 1)! \cdot (n_i - j_s + 1)!} \cdot \frac{(n_{ik} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - j_{ik} - k_2 - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{(j_s)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa} - l}^{(l_s + j_s - l)} \sum_{n_i = n + \mathbb{k} - j_s + l - l_s}^{(n_i + j_s - l)} \sum_{n_{is} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{is} + j_s - l - \mathbb{k}_1)} \sum_{n_{ik} = n_{sa} + j^{sa} - j_i - \mathbb{k}_2}^{(n_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_{sa} = n_{sa} - j^{sa} + 1}^{(n_{sa} - j^{sa} + 1)} \sum_{n_s = n - j_i + 1}^{(n_s - j_i + 1)} \right) \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

GÜLDÜZYA

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(j^{sa}-j_{ik}-l_{k3})} \sum_{(n_{sa}=n+l_{k3}-j^{sa})}^{(j^{sa}-j_{ik}-l_{k3})} \sum_{n_s=n-j_i+1}^{(n_{sa}-n_s-1)!} \frac{(j_s-1)! \cdot (n_i-j_i+1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \frac{(n_{ik}-n_{sa}-l_{k2}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}-n_{sa}-j^{sa}-l_{k2})!} \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

GÜLDENWA

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j_s - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^j \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge 2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge D \geq n < n \wedge l = \mathbb{k} > 1 \wedge j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge s \geq 5 \wedge s = \dots + \mathbb{k} \wedge \mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n_{sa}-j_i+1}^{n_{sa}+j_{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n+l_s \wedge l_s > D-n+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j_{sa} \leq j_i+j_{sa}-s \wedge j_{sa}+s-j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik}-j_{sa}^{ik}+1 = l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i+j_{sa}-s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

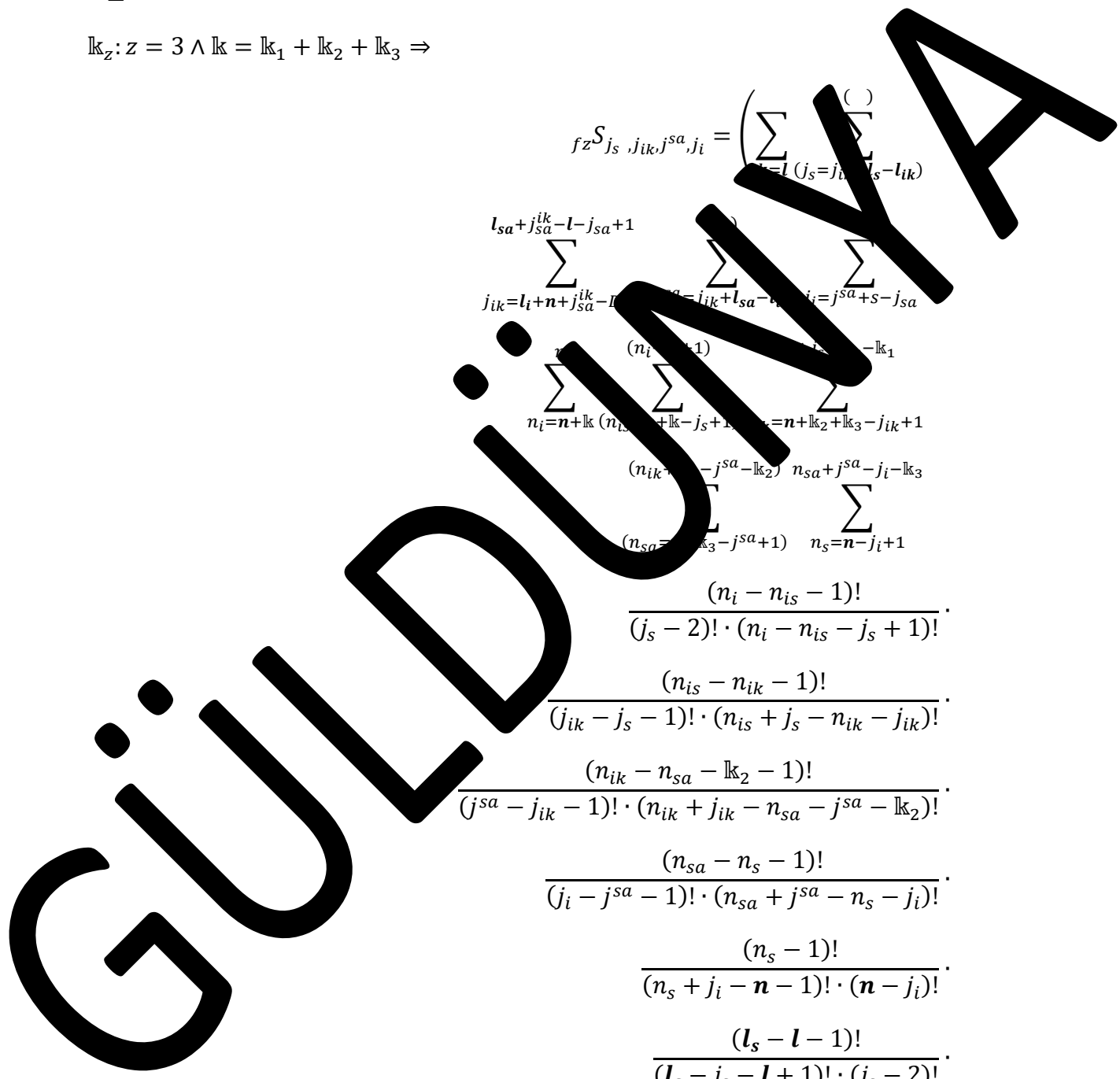
$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+l}^{()} \sum_{j_{sa}=j_{sa}^i-l}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^i-l}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-n_{is}-1)} \sum_{n_{is}=n_{is}+l-j_s+1}^{(n_{is}-n_{ik}-1)} \sum_{n_{ik}=n_{sa}-j_{sa}-\mathbb{k}_2}^{(n_{ik}+j_{ik}-n_{sa}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}-n_s-\mathbb{k}_3-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_1}+j^{sa}-j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j^{sa}-1)! \cdot (n_s=n-j_i-j^{sa}-1)!} \cdot \frac{(n_s-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(n_{ik}-j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k_2+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDÜZÜM

$$\begin{aligned}
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)
\end{aligned}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} - j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \geq 5 \wedge \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-n_{sa}-j_{sa}^{ik}-j_i-k_3)!}{(n_{sa}=n+k_3-j_{sa}^{ik}-1) \cdot (n_s=n-j_i-k_2-k_1-k_3+1)}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_s-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{l_{ik}-l+1} \left(\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{j_{ik}=l_i+n+j_{sa}^{ik}-D} \sum_{j_{sa}=j_{ik}+l_{sa}-1}^{j_{sa}=j_{ik}+l_{sa}-1} \sum_{j_i=j_{sa}+s-j_{sa}}^{j_i=j_{sa}+s-j_{sa}} \right) \right)$$

$$\sum_{n_i=n+\mathbb{k}}^{n_i=n+\mathbb{k}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}=n+\mathbb{k}-j_s+1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{n_{sa}=n+\mathbb{k}_3-j_{sa}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{j_s=j_{ik}+l_s-l_{ik}} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}^{ik}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-n_{sa}+j_{sa}^{ik}-j_i-k_3)}{(n_{sa}=n+k_3-j_{sa}^{ik}-1) \cdot (n_s=n-j_i)} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j_{sa}-k_2)!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_{sa}-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (j_i + j^{sa} - n_s - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa} \leq j^{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + j_s = l_s \wedge l_s - j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge \{j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_{sa}+s-l-j_{sa}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_i-j_i-k_3)}{(n_{sa}=n+k_3-k_1+1) \cdot (n_s=n-j_i)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+l_{sa}-l_{is})}^{(\cdot)} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}-j_{sa}-k_3)}^{(n_{ik}-j_{sa}-k_3)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(\cdot)} (j_s = j_{ik} + l_s - l_{ik}) \\ &\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{j_i = l_i + l_{sa} - l_i}^{(\cdot)} \sum_{j_i = l_i + n - D}^{l_{sa} + s - l - j_{sa} + 1} \\ &\sum_{n_i = n + \mathbb{k}}^{n} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{i=1}^n \sum_{j_i=1}^{(n-i)} \sum_{k=1}^{(j_i)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s=j_i+l_s-l_i)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(n_i=n+k)}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

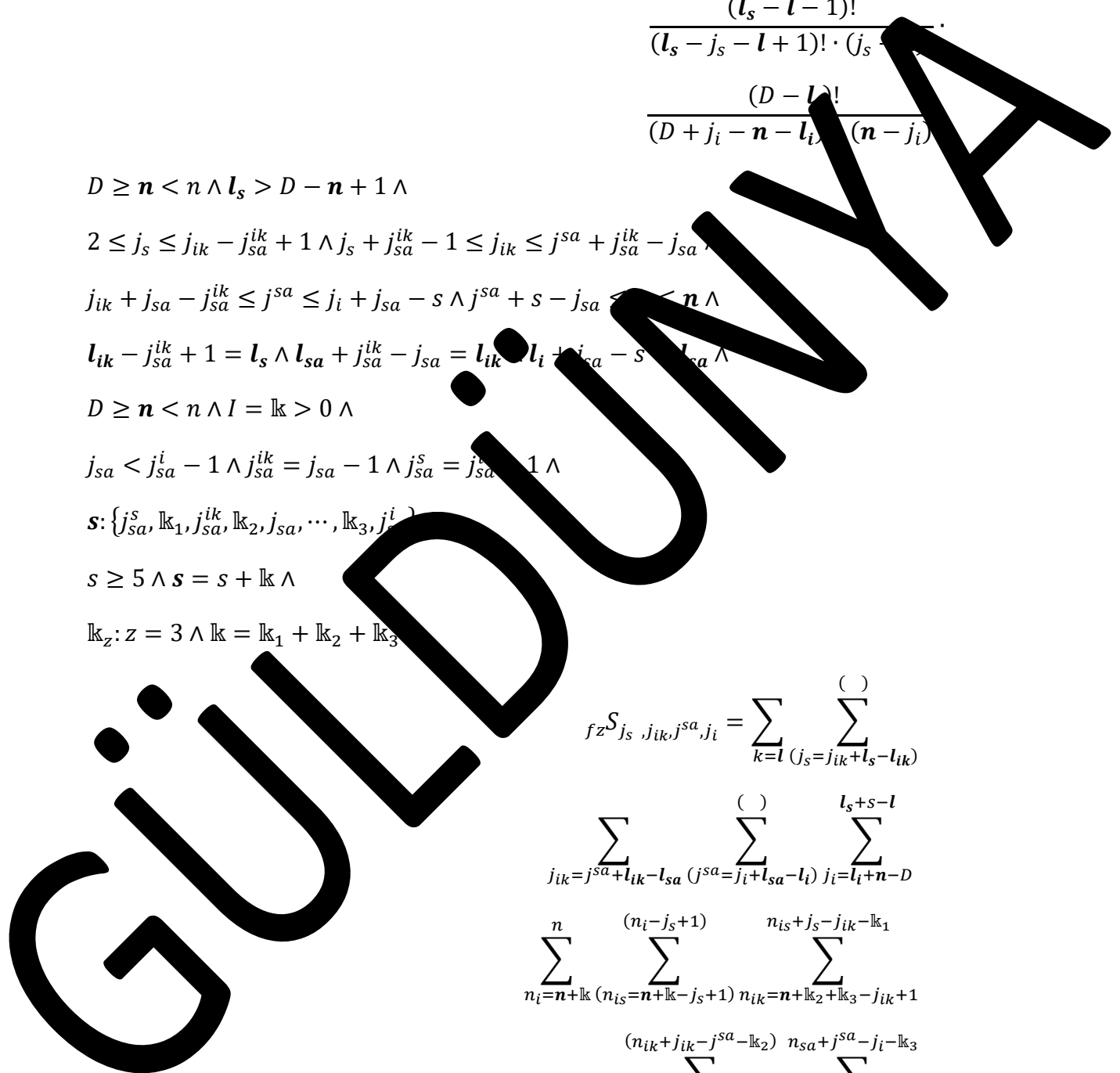
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - l} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s - j_{sa}^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^l, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > \dots - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > \dots \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-l}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1}} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i)}{n_s=n-j_i+1}}$$

$$\frac{(n_i - 1)}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s + 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{ik}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\)} \frac{(l_{sa}+s-j_{sa}+1)}{\dots} \frac{(n_i-n_{is}-1)!}{(j_s-l)! \cdot (n_i-n_{is}-j_s+1)!} \dots \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \dots \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(\cdot)} (j_s = j_{ik} + l_s - l_{ik}) \\ & \sum_{j_{ik}=j_s}^{(\cdot)} \sum_{l_{ik}=l_{sa}}^{(\cdot)} (j^{sa} = l_{sa} - l_i) \sum_{j_i=l_s+n+s-D-1}^{l_i-l+1} \\ & \sum_{n_i=j_s+\mathbb{k}}^{n} (n_{is}=n+\mathbb{k}-j_s+1) \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i=1}^n \sum_{j_{sa}^{ik}+l_{ik}-l_{sa}}^{j_i} \sum_{k=l}^{j_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s=j_i+l_{sa}-l_i)} \sum_{j_i=l_s+n+s-D-1}^{l_{sa}+s-l-j_{sa}+1} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + n + s - D - 1}^{l_{ik} + s - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{sa}, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s + j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_i+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-\mathbb{k}_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$$

$$Z \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$n - j_s \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = \dots + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(l_{sa} - l + 1)} (j_{sa} = l_i + n_i - D - s) j_i = j_{sa} + \dots$$

$$\sum_{n_i = \dots}^n (n_i = n_i + j_s + 1) n_{ik} \dots + j_s - j_{ik} - \mathbb{k}_1$$

$$\sum_{(n_{ik} + j_{ik} - \dots - \mathbb{k}_2)}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \sum_{(n_{sa} = \dots - \mathbb{k}_3 - j_{sa} + 1)} \sum_{n_s = n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

GÜLDENMYA

$$fz \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}_1+1}^{(n_i-j^{sa}+1)} \sum_{n_{is}=n+\mathbb{k}_2+1}^{(n_{is}-j_{ik}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}^{(n_s-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$j_{ik}=j^{sa} - k - l_{sa} \quad (j^{sa}=l_i+n+j_{sa}-D-s) \quad j_i=j^{sa}+l_i-l_{sa}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

GÜLDÜNKYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_3: z = 3 \wedge \mathbb{k}_3 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s < j_{sa}^{l_{sa}} - j_{sa}^{ik} = j_{sa}^{l_{sa}} - 1 \wedge j_{sa}^s = j_{sa}^{l_{sa}} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, \dots\}$

$s \geq 5, l_s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + l_{k_3} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s + j_{sa}^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_3} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_{k_3} - 0 \wedge$$

$$j_{sa} < j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{sa}, j_{sa}^{ik}, j_{sa}^i, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s \leq s + l_{k_3} \wedge$$

$$l_{k_z}: z = 3 \wedge l_{k_3} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}+1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3+1)!}{(j_i-j^{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D > n + 1 \wedge$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa}^{ik} - j_s \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$s \geq n - l_i \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+l_{ik}}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{j_{ik}+1}^{n_{ik}+j_{ik}-\mathbb{k}_2}$$

$$\sum_{j^{sa}+1}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{j_i=n-j_i+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n_s \wedge l_s > D - n + 1 \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()} \\ \sum_{j_{ik}=j_{sa}^i + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j_{sa} = l_{ik} + n + j_{sa}^i - j_{sa}^{ik})}^{(j_s - j_{ik} - \mathbb{k}_1)} \\ \sum_{n_i=0}^n \frac{(n_i - n_{is} - 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \\ \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \\ \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\ \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\ \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{(l-l+1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - l)!}{(D + l - n - l_i - j_i - l)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_s$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i \wedge j_{sa}^i = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge \mathbb{k}_3 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n_s - l - 1)!}{(n_s - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = j_s > 0 \wedge$$

$$j_s < j_{sa}^{ik} - j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^{ik}\}$$

$$s \geq 5, j_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i-n_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i-\mathbb{k}_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}
 \end{aligned}$$

$$D \geq l_s \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$n_s \geq n - l_s \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{(j^{sa}+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1) \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = \dots + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} (j_{sa}=j_{ik}-l_{ik}) j_i=j_{sa}^{ik}-j_{sa}$$

$$\sum_{n_i=0}^n (n_{is}=n_{i_s}+1) n_{ik}=j_{ik}+1$$

$$\sum_{(n_{sa}=l_{k_3}-j_{sa}+1)}^{(j_{sa}-j_{ik}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

GÜLDENMYA

$$fz \sum_{j_s, j_{ik}, j_{sa}, j_i} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{(j_{sa} = j_{ik} - l_{ik})} \sum_{(j_i = j_{sa} + l_i - l_{sa})} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l_{sa})} \sum_{(j_{sa} = j_{ik} - l_{ik})} \sum_{(j_i = j_{sa} + l_i - l_{sa})} \sum_{(n_i = n + \mathbb{k}_1 - j_{ik} - 1)} \sum_{(n_{is} = n + \mathbb{k}_1 - j_{ik} - 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1)} \sum_{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n-k}^{j_{sa}^{ik}-l_{sa}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j_{sa}^i+l_i-l_{sa}}^{()}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{k-l+1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(s - l_i)!}{(D + l_i - n - l_i - j_i - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i + 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_3: z = 3 \wedge \mathbb{k}_3 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s - j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s < j_{sa}^{l_{sa}} - j_{sa}^{ik} = j_{sa}^{l_{sa}} - 1 \wedge j_{sa}^s = j_{sa}^{l_{sa}} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, \dots\}$

$s \geq 5, l_s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+j_{sa}^{l_{sa}}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s + j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_3} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{l_1}, j_{sa}^{l_2}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + l_{k_3} \wedge$$

$$l_{k_z}: z = 3 \wedge l_{k_3} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{ik}+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}+1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle D = n + 1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$s \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l}^{(\)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(n_{sa}=n+k_3-j^{sa}-1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(\cdot)} \sum_{i=j_{sa}^{ik}-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}=n+j_{sa}-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n+j_{sa}-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n+j_{sa}-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n+j_{sa}-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=l}^{(j_s=j_{ik})} \dots$$

$$\sum_{j_{ik}=s+n+l}^{l_{ik}-l+1} \sum_{(n_i=n+l)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l)}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{ik}=n+k)}^{(n_{ik}=n+l)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_{ik}+j_s-j_{sa}-k_2)}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\sum_{n_s=n-j_i+1}^{(n_s=n+l)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDENWA

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}+l_{ik}-l_s}^{n} \sum_{j_{sa}+l_{sa}-l_{ik}}^{n} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n} \sum_{j_s=l_i+n-D-s+1}^{l-s+2} \\ & \sum_{n_i=n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)} \sum_{j_{ik} = j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^i, j_{sa}^i, k_3, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s \leq s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots < n \wedge l_s > D \dots n + 1$

$\dots \leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge \dots + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} = \dots - j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < \dots \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_s}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{(n_{i_s}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}+1)! \cdot (n_s=n-j_i-k_3)!} \cdot \frac{(n_i-n_{i_s}-1)!}{(j_s-2)! \cdot (n_{i_s}-j_s+1)!}$$

$$\frac{(n_{i_s}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{i_s}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{i_s} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-l-s+2)} \sum_{(j_{ik}=j_s+l_{ik}-l_s)}^{(j_{sa}=j_{ik}+k_1)} \sum_{(j_i=j_s+l_i-l_{sa})}^{(j_i=j_s+l_i-l_{sa})} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_{is}=n_{is}+j_s-1)}^{(n_{is}=n_{is}+j_s-1)} \sum_{(n_{ik}=n_{ik}+k_2+k_3-j_{ik}+1)}^{(n_{ik}=n_{ik}+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}=n_{sa}-j_{sa}-k_3)}^{(n_{sa}=n_{sa}-j_{sa}-k_3)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \frac{(l_{ik} - l_s + 2)}{(j_s = l_{sa} + n - D + 1)} \cdot \sum_{j_{ik} = l_{ik} - l_s}^{(n)} \sum_{j_{sa} = j_{ik} + l_{sa}}^{(n)} \sum_{j_i = l_i - l_{sa}}^{(n)}$$

$$\frac{\sum_{j_s = n + k}^{n} (n_i - j_s + 1)}{(n_{is} = n + k_1 + j_s + 1)} \cdot \frac{\sum_{j_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}}{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)} \cdot \frac{\sum_{j_{sa} = n + k_3 - j_{sa} + 1}^{(n_{ik} + j_s - j_{sa} - k_2)} \sum_{j_i = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3}}{(n_{sa} = n + k_3 - j_{sa} + 1)} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

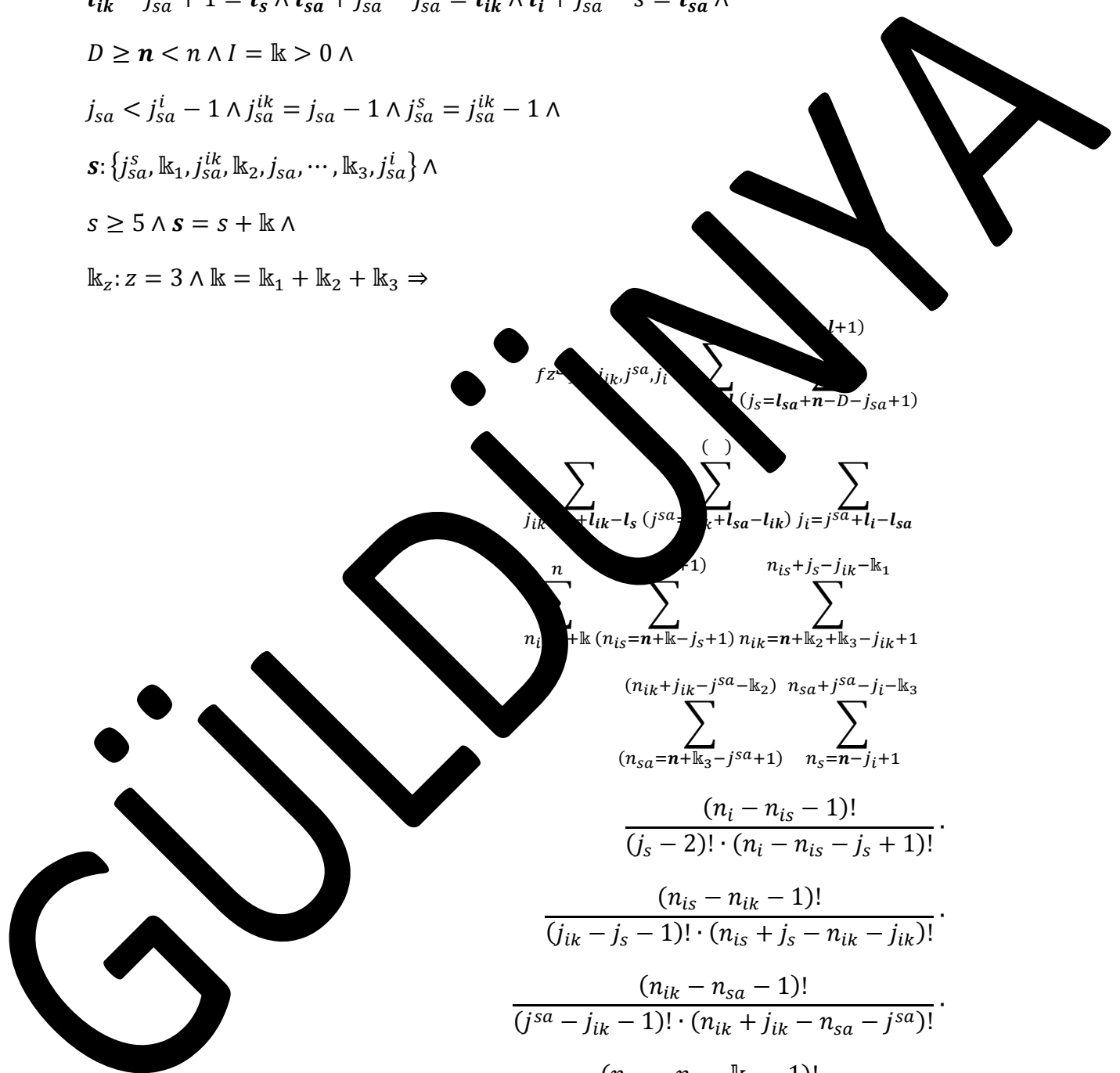
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz = \sum_{j_{ik}=j_{sa}^{ik}}^{n+1} \sum_{j_i=j_{sa}^{ik}}^{n+1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{l+1} \sum_{j_{ik}+l_{ik}-l_s}^{(j_{sa}^{ik}+l_{sa}-l_{ik})} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}}^{(j_{sa}^{ik}+l_{sa}-l_{ik})} \sum_{n_i=j_{sa}^{ik}+l_{sa}-l_{ik}}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_i+l_{ik}}^{(n_{is}+n+l_{ik}-j_s+1)} \sum_{n_{ik}=n+l_{ik}+l_{sa}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+l_{ik}+l_{sa}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=1}^{(l_i - l - s + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_i - l - s + 2)}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{()} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

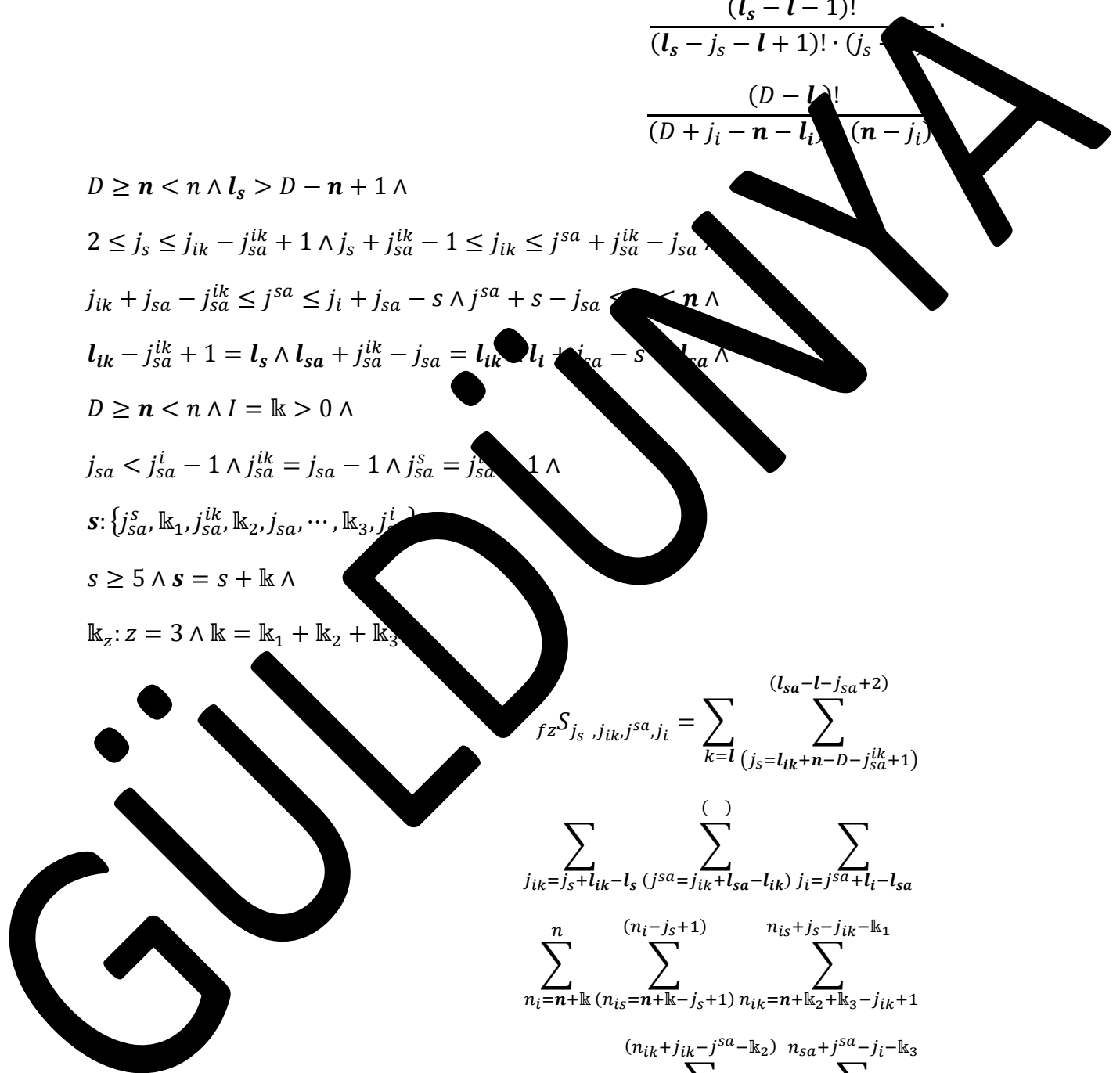
$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}+1)}^{(j_s-l-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j_i=j^{sa}+l_i-l_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s + j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^i, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - j_s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 3 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j^{sa}-j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots < n \wedge l_s > D \dots n + 1$

$\dots \leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge \dots + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} = \dots - j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < \dots \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i-l_{k_3})}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > l - n + 1 \wedge$$

$$2 \leq l \leq D \wedge l_s + s - n - l_i \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} (j_{sa}=j_{ik}-s) \quad j_i=l_i+l_{sa}+s-j_{sa}+1$$

$$\sum_{n_i=0}^n (n_{is}=n_i+l_i+1) n_{ik} \quad j_i=j_{ik}+1$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\cdot)} n_{sa}+j_{sa}-j_i-\mathbb{k}_3$$

$$\sum_{(n_{sa}=n_{ik}-\mathbb{k}_3-j_{sa}+1)}^{(\cdot)} \sum_{n_s=n-j_i+1}^{(\cdot)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

GÜLDENYA

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{l_{sa}+s-l-j_{sa}+1} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n-D}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{(j^{sa}=l_{sa}+n-D)} \sum_{l_i-l+1}^{j_i=l_{sa}+s-l-j_{sa}+2}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDÜZ

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa})!}{(j^{sa} + l_i - j_s - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge 2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_s^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_s^{ik} - j_s \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge D \geq n < n \wedge I = \mathbb{k} > 1 \wedge j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_s^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge s: \{j_s^{ik}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge s \geq 5 \wedge s = 1 + \mathbb{k} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{n} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)!(n_{ik}+j^{sa}-n_s-j_i-\mathbb{k}_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_s + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

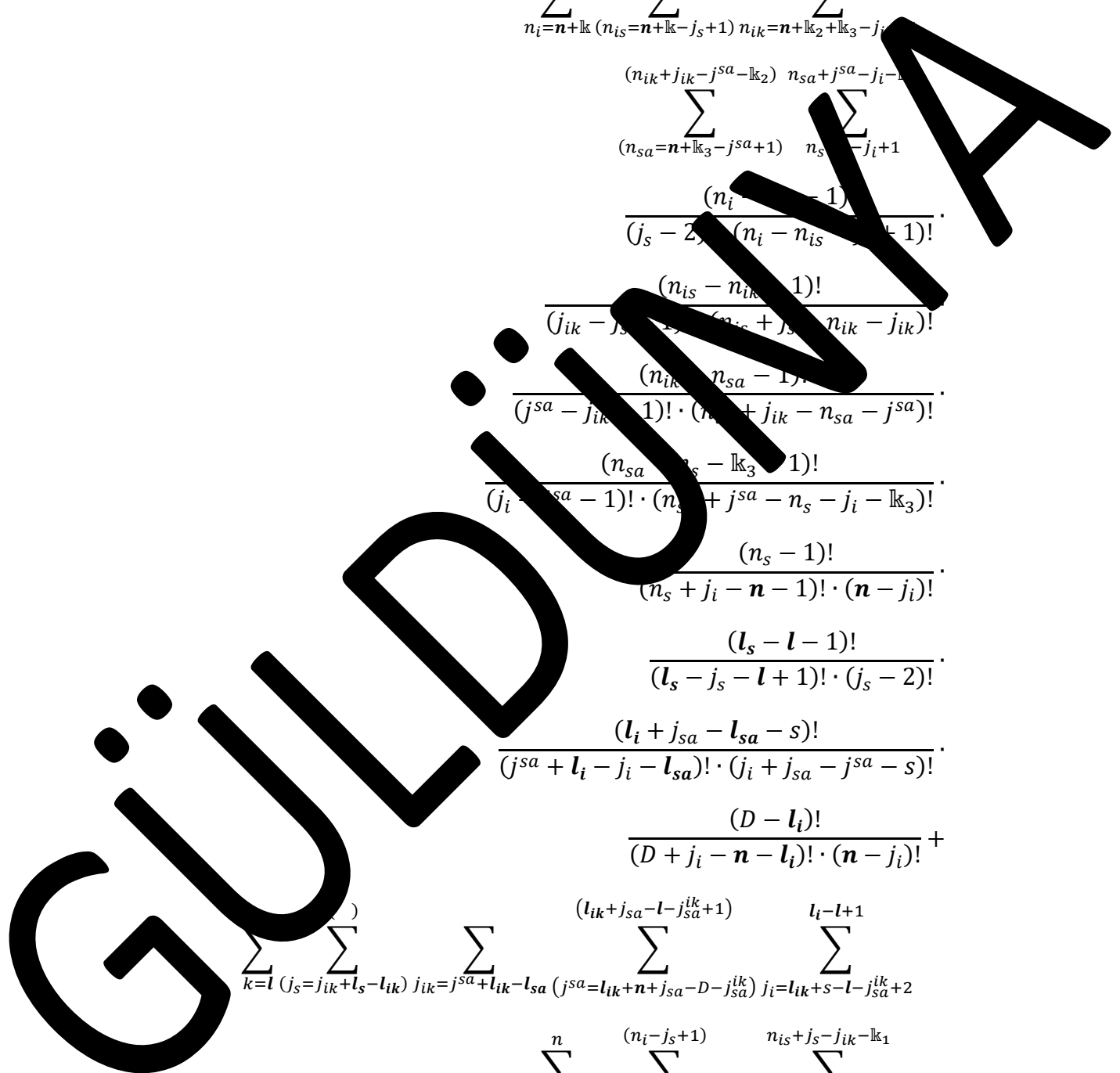
$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-1} \\
 \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^s \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i-l+1} \\
 \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-k_3}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa})!}{(j^{sa} + l_i - j_s - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_s^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_s^{ik} - j_s \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_s^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^{ik}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = 1 + \mathbb{k} \wedge$$

$$I = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i=l+1}^{l_i-l+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l} \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l = s - D + l + 1 \wedge$$

$$2 \leq l \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

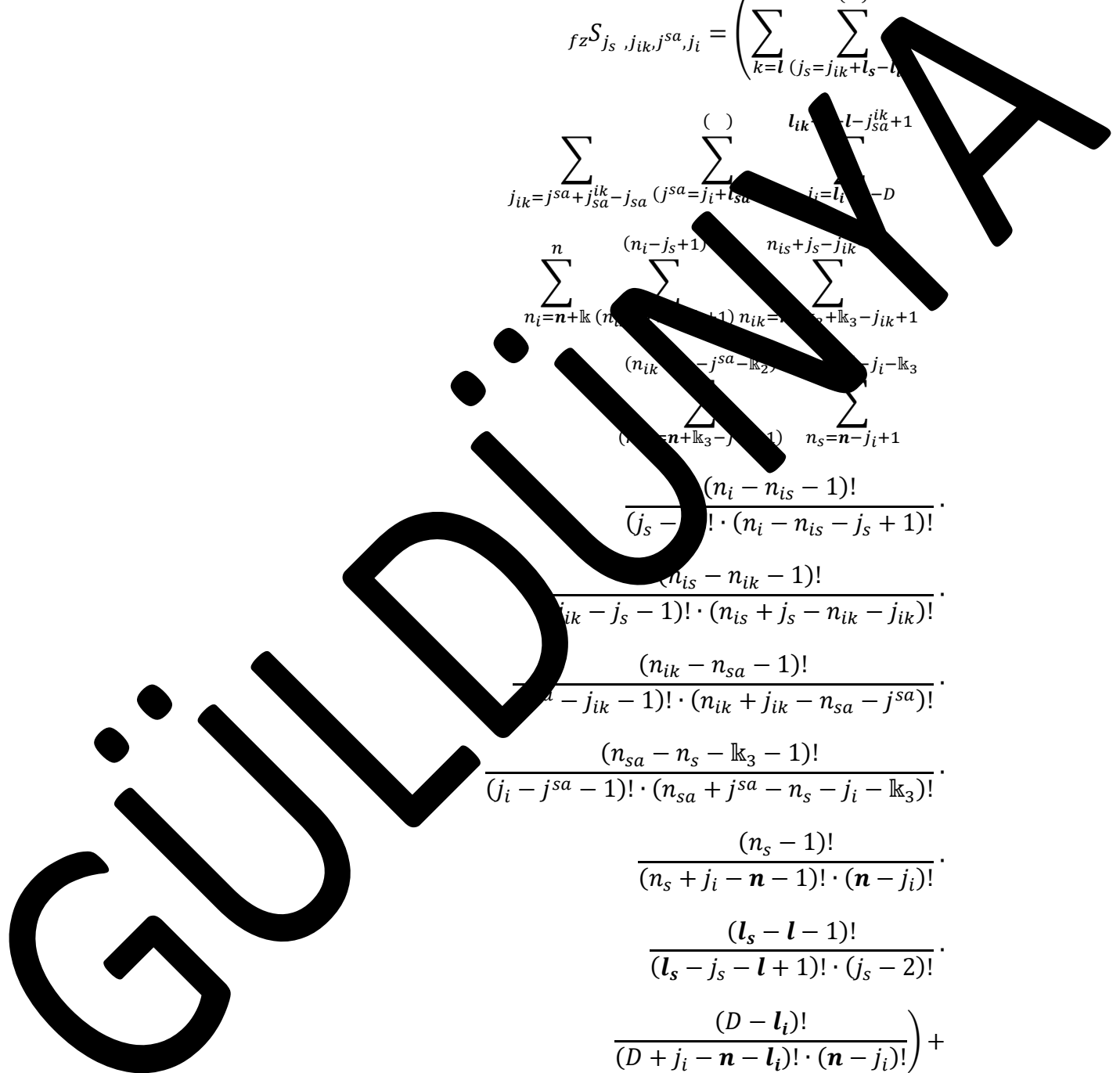
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{(j_{sa}=j_i+l_{sa})} \sum_{(l_{ik}=l-j_{sa}^{ik}+1)} \sum_{(n_i=n+k)} \sum_{(n_i=n_{is}+1)} \sum_{(n_{ik}=n_{is}+k_3-j_{ik}+1)} \sum_{(n_{ik}=n_{sa}-j_{sa}-k_2)} \sum_{(n_s=n-k_3-j_i+1)} \frac{(n_i-n_{is}-1)!}{(j_s-j_{ik}-1)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \dots \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j^{sa} - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_i \wedge D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i \geq D - l + 1 \wedge$$

$$2 \leq l \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(l_{ik}=l-j_{sa}^{ik}+1)}^{()} \sum_{(j_i=l_{ik}-D)}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}=n_{is}+k_3-j_{ik}+1)}^{(n_{ik}=n_{is}+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(j_i-k_3)}^{(j_i-k_3)} \sum_{(n_s=n+k_3-j_{sa}-1)}^{(n_s=n+k_3-j_{sa}-1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

GÜLDENYA

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{j^{sa}+j_{sa}^{lk}-j_{sa}-1} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{lk}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \frac{(l_i - l_i)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + l_i - s \wedge j^{sa} + s - j_i \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq s \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s = D - n - 1 \wedge$

$2 \leq l_s \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$2 \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_{zS}^{j_s, j_{ik}, j^{sa}, j_i} &= \left(\sum_{k=l} \binom{()}{j_s = j_{ik} + l_s - l_{ik}} \right. \\
 &\quad \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \binom{()}{j^{sa} = j_i + j_{sa} - s} \binom{l_s + s - l}{j_i = l_i + n - D} \\
 &\quad \sum_{n_i = n + k} \binom{n_i - j_s + 1}{n_{is} = n + k - j_s + 1} \binom{n_{is} + j_s - j_{ik} - k_1}{n_{ik} = n + k_2 + k_3 - j_{ik} + 1} \\
 &\quad \binom{n_{ik} + j_{ik} - j^{sa}}{n_{sa} = n + k_3 - j^{sa} + 1} \binom{n_{sa} + j_i - j_i - k_3}{n_s = n - j_i} \\
 &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \\
 &\quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\quad \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\quad \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\quad \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 &\quad \left(\sum_{k=l} \binom{()}{j_s = j_{ik} + l_s - l_{ik}} \right. \\
 &\quad \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \binom{j_i + j_{sa} - s - 1}{j^{sa} = l_s + n + j_{sa} - D - 1} \binom{l_s + s - l}{j_i = l_i + n - D} \\
 &\quad \sum_{n_i = n + k} \binom{n_i - j_s + 1}{n_{is} = n + k - j_s + 1} \binom{n_{is} + j_s - j_{ik} - k_1}{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(n)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s > 5 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \dots + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_s + j_{sa} - l)}^{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(j_s - 1)! \cdot (n_s - j_i)!} \cdot \frac{(n_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l \leq D + l_s + s - n - 1$

$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ls} - 1 \leq j_{ik} \leq j_s^a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j_s^s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_s^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = l + \mathbb{k} \wedge$

$z = l + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\quad)} \binom{(\quad)}{j_s=j_{ik}+l_s-l_{ik}} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(n_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = n + l_s - l_{ik})}^{()} \sum_{j_{ik} = n + j^{sa} - D - 1}^{l_s + l - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + s - l + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLÜMWA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{sa} \leq j_i - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_{i-1}, j_{sa}^{i-1}\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - 1)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l \leq D + l_s + s - n - l_i$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > n \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = \dots + \mathbb{k} \wedge$

$\dots \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}^{l_s+s-l} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(n_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{(l_s)} \sum_{j^{sa}+l_{ik}-l_{sa}}^{(l_s)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLÜMWA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_{s-1}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s)!} \cdot \frac{(n_s - l - 1)!}{(n_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l \leq D + l_s + s - n - l_i$

$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_s^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j_s - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_s \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > n \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = \dots + \mathbb{k} \wedge$

$\dots \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\sum_{j_i=l_i+n-D}} \binom{l_s+s-l}{\sum_{j_i=l_i+n-D}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{ik}+1)!(n_{is}+j_{ik}-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!}$$

$$\left. \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} \right) +$$

$$\left(\sum_{k=l} \binom{(\quad)}{\sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(j_i+j_{sa}-s-1)}{\sum_{j_i=l_i+n-D}} \binom{l_s+s-l}{\sum_{j_i=l_i+n-D}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDÜZ

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - j_i - 1)!} \cdot \\
 & \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{(j_s=j_{ik}+l_s-l)}^{j_{sa}^{ik}-l} \sum_{(l_{sa}=l+1)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{\binom{j_s = j_{ik} + l_{sa}}{j_{ik} = l_s + n + j_{sa}^{ik} - 1} \binom{j^{sa} = j_{sa}^{ik} - j_{sa} - 1} \binom{j_s - l}{j_i = l_i + n - D}}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_i - j_s} \sum_{n_{is} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - j^{sa} - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{ik} - j_{sa} - l_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s = \mathbb{k} > 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l} \right)$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{s_a} - j^{s_a})!} \cdot$$

$$\frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j^{s_a} - n_s - l_{k_3})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=l_s+n-D)}^{l_s+s-l} \right)$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(j_i+j_{s_a}-s-1)} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{l_s+s-l} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDEN

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j^{sa} - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{l_s} \sum_{j^{sa}+l_{ik}-l_{sa}}^{l_{sa}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_{sa} = j_{ik} - j_s + 1)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(l_s + s - l)}^{(j_{ik} - j_{sa}^{ik})}$$

$$\sum_{(n_i = n + k)}^n \sum_{(n_{is} = n + k_1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS}^{j_s, j_i, j_{sa}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\ &\sum_{k=j_{sa}^{ik}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_i-l+1)} \sum_{j_i=l_i+n-D}^{(l_i-l+1)} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i)!}{(D + l_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_i \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \wedge$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=\mathbf{n}+k}^n \sum_{(n_{is}=\mathbf{n}+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
 \end{aligned}$$

GÜLDÜMÜYA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l_s=0}^{(l_s-1)} \sum_{j_i=0}^{(n-D)-j_i} \sum_{l_{ik}=0}^{l_{ik}-l+1} \sum_{j_{ik}=j_i+l_{sa}-l_i}^{l_{ik}+n-D-j_i} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_{is}=n+l_{ik}-j_s+1}^n \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_{ik}-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_{sa} - l_i)} \sum_{j_i = l_i + n - j_{ik} - l} \\
 & \sum_{n_i = n + l_{ik} - j_{sa} - j_{sa}^{ik} - j_{sa}}^n \sum_{n_{is} = j_{ik} - l_{k_1}}^{j_s} \sum_{n_{ik} = n + l_{k_2} + l_{k_3} - j_{ik} + 1}^{n_{is} - j_{ik} - l_{k_1}} \\
 & \sum_{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa})}^{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa})} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_i}^{s, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(D - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \leq 5 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j_{sa} + s - j_{sa}} \binom{(l_{sa} - l + 1)}{\quad}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{j^{sa}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=n+k} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - 1)!} \cdot \frac{(n - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j^{sa}+l_{ik}}^{n+j_{sa}-l_{ik}-l+1} \sum_{(j^{sa}=l_s, n-D)}^{n-D} \sum_{j_i=l_i+n-D}^{n-D} \sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{(n_i-j_{ik})} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!} \right) + \\
 & \sum_{j_{ik}=j} \sum_{n_{ik}=l_{sa}} \sum_{(j^{sa}=l_i + j^{sa} - D - s)} \sum_{j_i=j^{sa} + s - j_{sa} + 1} \sum_{l_i=l+1} \sum_{(j_s + l_{sa} - l_{ik})} \sum_{(n_i - j_s)} \sum_{n_{is}=n + \mathbb{k} - j_s + 1} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1} \sum_{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)} \sum_{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \sum_{n_s = n - j_i + 1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_i + n + j_{sa} - D - s - 1)} \sum_{l_i - l + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - k - k_1}^{n_{is} + j_s - k - k_1} \sum_{j_{ik} + 1} \\
 & \sum_{(n_{ik} + j_{ik} - j^{sa} - k_2)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{(n_{sa} + j^{sa} - k_3)}^{n_{sa} + j^{sa} - k_3} \sum_{j^{sa} + 1}^{= n - j_i + 1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \sum_{(j_s=j_{ik})} \dots \right)$$

$$\sum_{i_{ik}=j_{sa}+j_{sa}^{ik}}^{j_s} \sum_{(j_{sa}=n+l-j_{sa}^{ik})} \sum_{l_i=l_{sa}}^{(l_s+j_{sa}-l-j_{sa}^{ik})}$$

$$\sum_{n+l}^n \sum_{(n_{is}=n+l_{ik}+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}^{ik}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)^+$$

GÜLDÜZMAYA

$$\left(\sum_{k=l}^{(\cdot)} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}) \dots (n_{sa}+j^{sa}-j_i-k_3)}{(n_{sa}=n+k_3-j_s+1) \dots (n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

GÜLDENWA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - j_{sa} - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{lk} \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+l_i-l}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_i+1)}^{(n_{ik}+j_{ik}-j_{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{sa}-l_{ik}}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{n+j_{sa}-D}^{(n+j_{sa}-D)} \sum_{i=j_{sa}+s-j_{sa}}^{(n+j_{sa}-D)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{(n_{is}+ \mathbb{k} - j_s + 1)}^{(n_i-1)-\mathbb{k}_1} \sum_{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\sum_{(n_{sa}-\mathbb{k}_3-j_{sa}+1)}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZÜMÜYA

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-1)! \cdot (n_{is}+j_s-j_{ik}-k_3)!}{(n_{sa}=n+k_3-j_s+1)! \cdot (n_s=n-j_i+1)!} \cdot \frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!}$$

$$\frac{(n_{is}-j_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^l \sum_{(j_s = j_{i_k} + l_s - l_{i_k})}^{()} \sum_{j_{i_k} = l_{i_k} + n - D}^{l_{i_k} - l + 1} \sum_{(j^{s_a} = l_{i_k} + j_{s_a} - l - j_{s_a}^{i_k} + 2)}^{(l_{s_a} - l + 1)} \sum_{j_i = j^{s_a} + s - j_{s_a}}^{l_i - l + 1}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{j_{ik} + l_s - l_{ik}} \sum_{j_{ik} = j_{sa} + j_{sa} - D - 1}^{j^{sa} + j_{sa} - 1} \frac{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)}{(j^{sa} = l_i + n + j_{sa} - D - s) j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s - 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 5$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{\binom{D+l_s-1}{k}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D+l_s-1}{k}} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{\binom{l_s+j_{sa}-l}{j^{sa}=l_i+n+j_{sa}-D-s}} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{l_s+j_{sa}-l}{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{i=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - 1)!} \cdot \frac{(n - l_i)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{\binom{(\cdot)}{(\cdot)}} \sum_{(j_s=j_{ik}+l_s-l_i)}^{\binom{(\cdot)}{(\cdot)}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_{sa}=l_s+n_{sa}-D-1)}^{\binom{(\cdot)}{(\cdot)}} \sum_{j_i=l_i+n-D}^{\binom{(\cdot)}{(\cdot)}} \sum_{n_i=n+1}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_i-j_s-1)}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{\binom{(\cdot)}{(\cdot)}} \sum_{(n_s=n-j_i+1)}^{\binom{(\cdot)}{(\cdot)}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{ik=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k} \sum_{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!} \right) + \\
 & \sum_{j_{ik}=l_s}^{j^{sa} + j_{sa} - j_{sa} - 1} \sum_{j_{sa}^{ik} = D - 1}^{(l_s + j_{sa} - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(n - j_s)} \sum_{n + \mathbb{k}_2}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{n + \mathbb{k}_3}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜMNA

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k-k_1}^{(n_{is}+j_s-k-k_1)} \sum_{(j_{ik}=n_{ik}+j_{sa}-j_i)}^{(n_{ik}+j_{sa}-j_i)} \\
 & \frac{(n_i - n_{is} - j_s + 1)!}{(n_i - n_{is} - j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - n_{is} - j_s - 1)!}{(n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(n_{sa} - n_s - k_3 - 1)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^n \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{n-l_s+j_{sa}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n-l_s+j_{sa}} \sum_{n_i=n-k_1}^{n-k_1+1} \sum_{n_{is}=n+k_1+1}^{n-k_1+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n-k_1+1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n-k_1+1} \sum_{n_s=n-j_i+1}^{n-k_1+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \right)$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{(l_s + j_{sa} - l)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_s + 1)}^{(n_{is} + j_s - 1) - k_1}$$

$$\sum_{(n_{sa} = n - k_3 - j^{sa} + 1)}^{(j_{ik} - j^{sa} - k_2) - n_{sa} + j^{sa} - j_i - k_3} j_{i+1}$$

$$\frac{(n - n_{is} - 1)!}{(j_s - 2)! \cdot (n - n_{is} - j_s + 1)!}$$

$$\frac{(n - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - l + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

GÜLDENYA

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + \mathbb{k} - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1 \\ n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}} \frac{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)} \frac{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}{n_s = n - j_i + 1} \cdot \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > n + 1$$

$$D + l_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_i+j_{sa}-l-s+1)}$$

$$j_{ik}=j^{sa}+l_{ik}-l_{sa} \quad (j^{sa}=l_i+n+j_{sa}-D-s) \quad j_i=j^{sa}+l_i-l_s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{sa}+j_{ik}-\mathbb{k}_3)} \sum_{(n_{sa}-j_{sa}+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(l_s+j_{sa}-l)} \binom{l_s+j_{sa}-l}{k} \binom{l_s+j_{sa}-l-k}{j_s-j_{ik}} \binom{l_s+j_{sa}-l-k-j_s+j_{ik}}{n+j_{sa}-l-k-j_s+j_{ik}} \right) \cdot$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^i-j_{sa}}^{(n-j_s+1)} \sum_{j_{sa}^i=j_{sa}+j_{sa}^i-j_{sa}}^{(n_{is}-j_s+1)} \sum_{j_{sa}^s=j_{sa}+j_{sa}^s-j_{sa}}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{j_{sa}^k=j_{sa}+j_{sa}^k-j_{sa}}^{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \cdot$$

$$\sum_{j_{sa}^s=j_{sa}+j_{sa}^s-j_{sa}}^{(n_{ik}+j_{sa}^s-k_2)} \sum_{j_{sa}^k=j_{sa}+j_{sa}^k-j_{sa}}^{(n_{sa}+j_{sa}^k-j_i-k_3)} \cdot$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_i=j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_k} - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \sum_{j_{i_k}=l_{i_k}+n-D}^{l_s+j_{s_a}^{i_k}-l} \sum_{(j^{s_a}=l_s+j_{s_a}-l+1)}^{(l_{s_a}-l+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i-l+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l=1}^{j^{sa} + j_s^{ik} - j^{sa} - 1} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{l_{ik} + n - D}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s - 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 5$$

$$f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{i_k=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
 \end{aligned}$$

GÜLDÜMÜŞA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_s - l + 1)! \cdot (j_i + j_s - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{(j_{ik} - j_{sa} - D)} \sum_{j_s=0}^{n + j_{sa} - l_s - 1} \sum_{j_{ik}=j_s}^{l_i - l + 1} \sum_{l_{sa}=l_s + n - D}^{l_i - l + 1} \sum_{j_i=l_i + n - D}^{l_i - l + 1} \\
 & \sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{n} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{is} + j_s + 1)} \sum_{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa}=n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s=n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜMNA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s-l+1)} \sum_{(j^{sa}=l_s+j_s-l+1)}^{(l_s-l+1)} \sum_{j_i=j^{sa}+s-l+1}^{(l_s-l+1)} \sum_{n_i=n+1}^n \sum_{(n_{is}=n+l_k-1)}^{(n_{is}=n+l_k-1)} \sum_{(n_{ik}=n+l_k-1)}^{(n_{is}-j_{ik}-l_{k1})} \sum_{(n_{sa}+j_{sa}-j_i-l_{k3})}^{(n_{sa}=n+l_{k3}-j^{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

GÜLDENMATA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k - k_3 - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - k_3)}$$

$$\sum_{(n_{sa} = n + k - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i - k_3}^{(n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_i - j_s - 1)!}{(n_i - j_s + 1)! \cdot (n_i - j_s + 1)!} \cdot \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_i - n_{sa} - 1)!}{(n_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - j_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n - l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

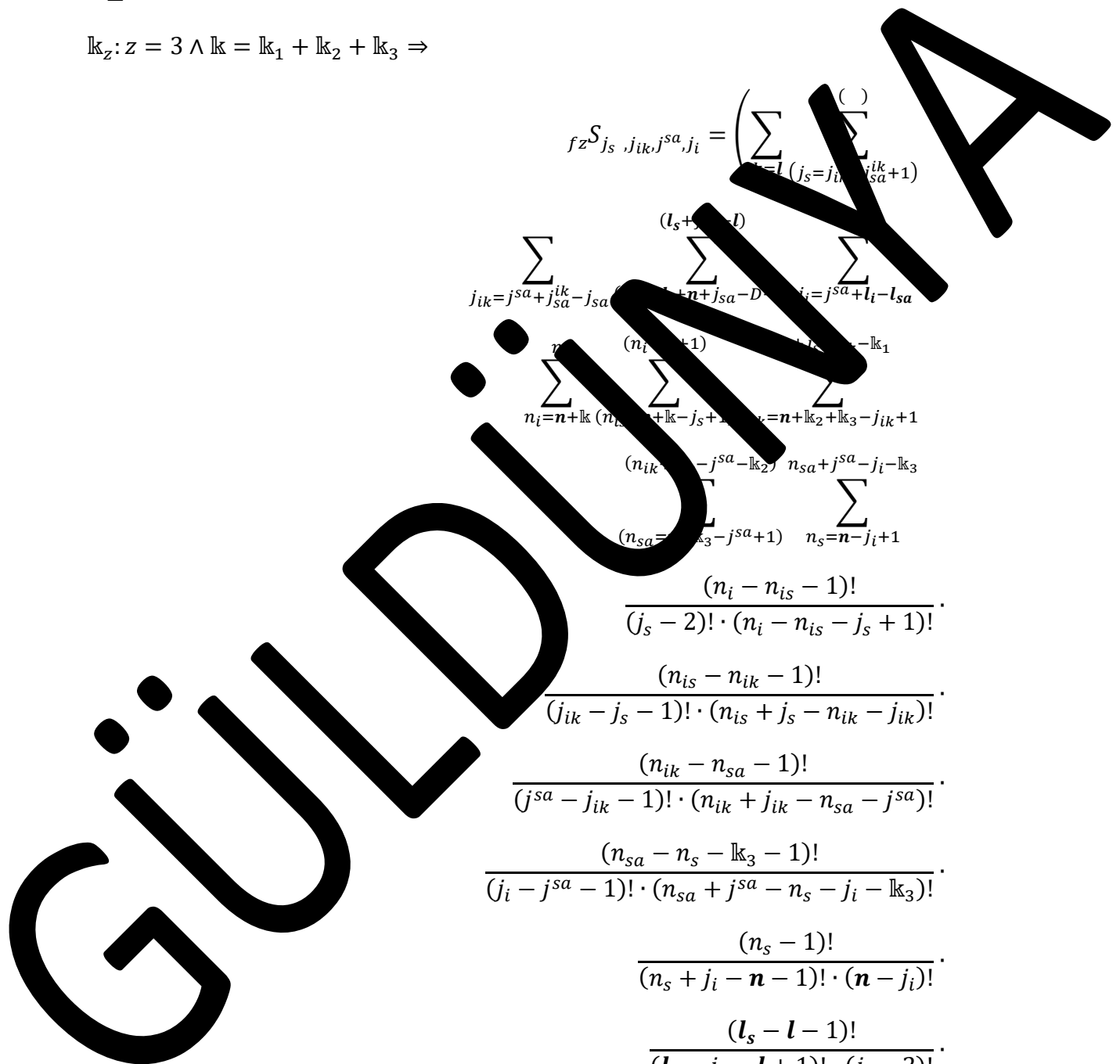
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+1}^{()} \sum_{j_{sa}=j_{sa}^{ik}+1}^{()} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+l-1)} \sum_{n_i=n+j_{sa}-D}^{(l_s+l-1)} \sum_{n_{is}=j_{sa}+l_i-l_{sa}}^{(l_s+l-1)} \sum_{n_{ik}=n_{is}+l_{ik}-\mathbb{k}_1}^{(n_{is}+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}+1)} \sum_{n_{is}=n_{ik}+l_{is}-j_s+1}^{(n_{is}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)} \sum_{n_{sa}=n_{ik}-j_{sa}-\mathbb{k}_2}^{(n_{ik}+1)} \sum_{n_{sa}=n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}-l_{k_2})}^{(j_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{(j_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_i+1)!} \cdot \frac{(n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_k} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^j \sum_{(j_s = l_s + n - D)}^{(j_{i_k} - j_{s_a}^{i_k})} \sum_{j_{i_k} = j^{s_a} + j_{s_a}^{i_k} - j_{s_a}}^{(l_s + j_{s_a} - l)} \sum_{(j^{s_a} = l_i + n + j_{s_a} - D - s)} \sum_{j_i = j^{s_a} + l_i - l_{s_a}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_i < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - j_{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = l + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\begin{aligned}
& \sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n_{sa}-j_i+1}^{n_{sa}+j_{sa}-j_i} \\
& \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j_{sa}-1)! \cdot (n_{ik}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(j_s - j_{ik} - j_{sa} - l_{ik})} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{(n_{is} - j_{ik} - 1)} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{(n_{ik} - n_{sa} - 1)} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{(n_{sa} - n_s - \mathbb{k}_3 - j_{sa} + 1)} \sum_{j_{ik} = l_i + n + j_{sa} - l}^{(n_s - n - j_i + 1)} \right) \cdot$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZÜMÜYA

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$(n_{ik}+j_{ik}-j^{sa}+j^{sa}-j_i-k_3)$$

$$(n_{sa}=n+k_3-j_s+1) \quad n_s=n-j_i+$$

$$\frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-s-1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} - j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \geq 5 \wedge \{j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n}^{l_i-l+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i+k_3}^{n_{sa}+j_{sa}-j_i-k_3} \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(j_s - j_{ik} - \mathbb{k}_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_{ik}-l+1} \sum_{j_{sa}=j_{ik}+l_{sa}-D}^{(n_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{j_i=j_{sa}+s-j_{sa}}^{(n_{is}-n_{ik}-1)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_{is}+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}-n_{ik}-1)} \sum_{n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{sa}-n_s-\mathbb{k}_3-1)} \sum_{n_s=n-j_i+1}^{(n_s-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜNYA

$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}^{ik}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j_s+1)! \cdot (n_s=n-j_i-k_3)!} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDENWA

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa} \leq j^{sa} + j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + j_s = l_s \wedge l_s - j_{sa} - j_s = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \geq 6, \{k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_{sa}+s-l-j_{sa}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-k_1-k_2+1)! \cdot (n_s=n-j_i-k_3)!}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \frac{(n_i - n_{is} - 1)!}{(j_s - l)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - k_1 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_{sa}, j_i} &= \sum_{k=l}^{()} (j_s = j_{ik} + l_s - l_{ik}) \\ &\sum_{j_{ik} = j_s + l_{ik} - l_{sa}}^{()} (j^{sa}) \sum_{i = l_{sa} - l_i}^{()} (l_{sa} + s - l - j_{sa} + 1) \\ &\sum_{n_i = n + \mathbb{k}}^{()} (n_i - 1) \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{()} (n_{is} + j_s - j_{ik} - \mathbb{k}_1) \\ &\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{()} (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2) \sum_{n_s = n - j_i + 1}^{()} (n_{sa} + j^{sa} - j_i - \mathbb{k}_3) \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{i=1}^n \sum_{j_i=1}^{(j_s - j_{ik} + l_s - l_{ik})} \sum_{j^{sa}=j_i+l_{sa}-l_i}^{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, \dots, j_i\}$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_i + n - D}^{l_s + s - l} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_{sa}+n+s-D-j_{sa}} \binom{()}{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_s=n-j_i+1} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_{sa}+j_i-n_s+1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$z \bullet j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa}^{ik} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_k - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \bullet j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s = l_{sa} \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-l} \\
 \sum_{n_i=n+l_{ik}} \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_{ik}-j_s+1}} \sum_{\binom{n_{is}+j_s-j_{ik}-l_{k_1}}{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{n_{sa}+j^{sa}-j_i}{n_s=n-j_i+1}} \\
 \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle D \geq n+1$$

$$j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\)} \sum_{j_i=l_{ik}+n+s-D-j_{ik}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(\)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(\)}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(\)} \sum_{n_s=n-j_i}^{(\)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \frac{(n_i - n_{is} - 1)!}{(j_s - l)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - k - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

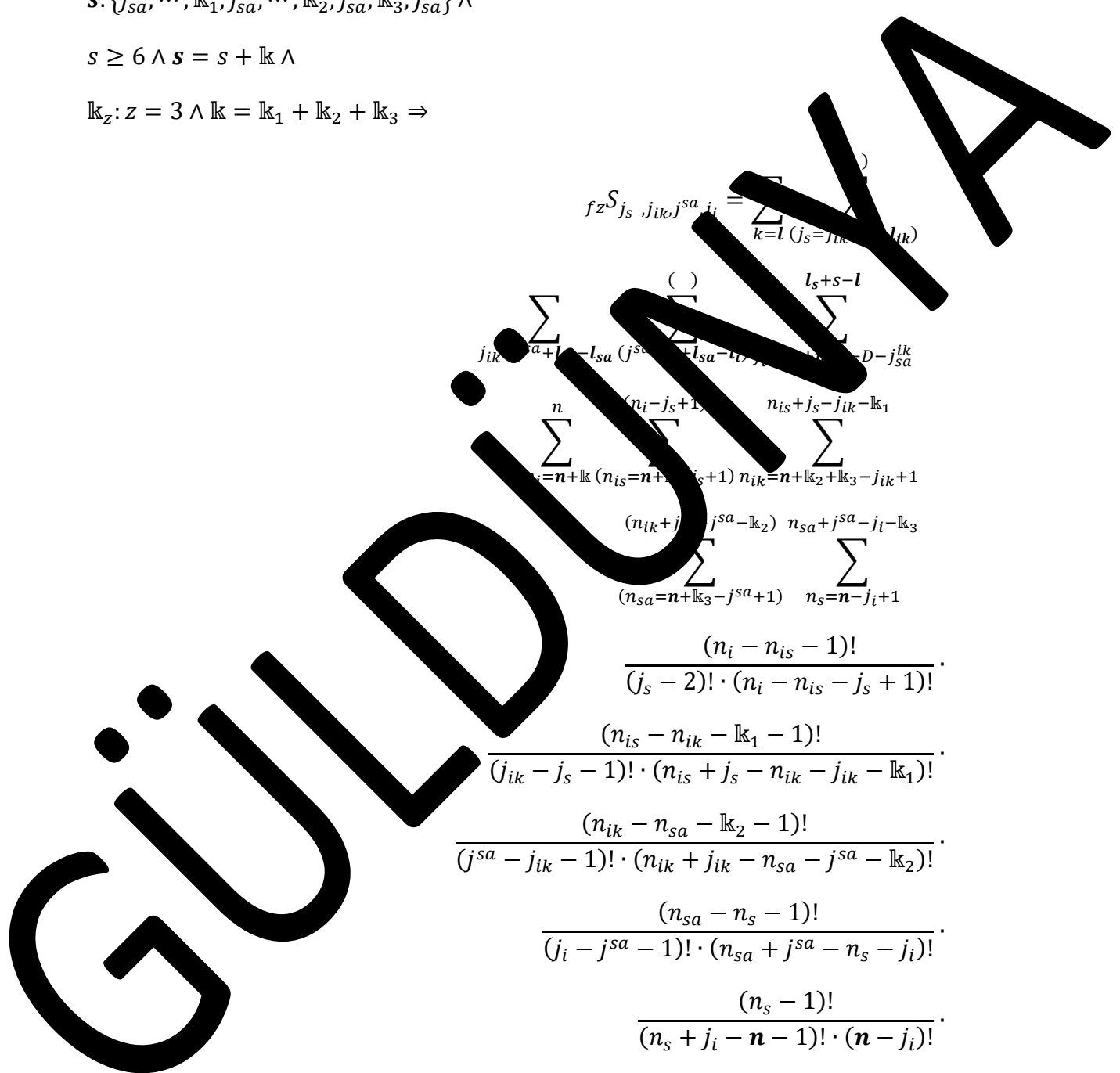
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{l_s+s-l} \binom{l_s+s-l}{k} \binom{D-j_{sa}^{ik}}{k} \binom{n}{n_i+n_k} \binom{n_i-j_s+1}{n_i+n_k} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{is}+n+k_2+k_3-j_{ik}+1} \binom{n_{ik}+j_{sa}-k_2}{n_{sa}+n+k_3-j_{sa}+1} \binom{n_{sa}+j_{sa}-j_i-k_3}{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_{sa}, j_i} &= \sum_{k=l}^{(\cdot)} (j_s = j_{ik} + l_s - l_{ik}) \\ & \sum_{j_{ik}=j_s}^{(\cdot)} \sum_{l_{ik}=l_{sa}}^{(\cdot)} (j^{sa} = l_{sa} - l_i) \sum_{j_i=l_s+n+s-D-1}^{l_i-l+1} \\ & \sum_{n_i=n-k}^{n} \sum_{n_{is}=n+k-j_s+1}^{(1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i = j_{sa} + l_{ik} - l_{sa}} \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \sum_{(j_i = l_s + n + s - D - 1)}^{l_{sa} + s - l - j_{sa} + 1} \sum_{(n_i = n + k)}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots, j_i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_s + n + s - D - 1}^{l_{ik} + s - l - j_{sa}^{ik} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, \dots, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2) \cdot (n_i-n_{is}-j_i+1)!}$$

$$\frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-j_i-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq \dots < n \wedge l_s > D \dots n+1 \wedge$

$Z \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$n \dots \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_Z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_i=j^{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{is}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} (j_{sa}=l_i+n_{is}-D-s) j_i=j_{sa}+l_{ik}-l_{sa}$$

$$\sum_{n_i=0}^n (n_{is}=n_{is}+1) n_{ik}+j_{ik}-j_{ik}+1$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{(n_{sa}=\mathbb{k}_3-j_{sa}+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

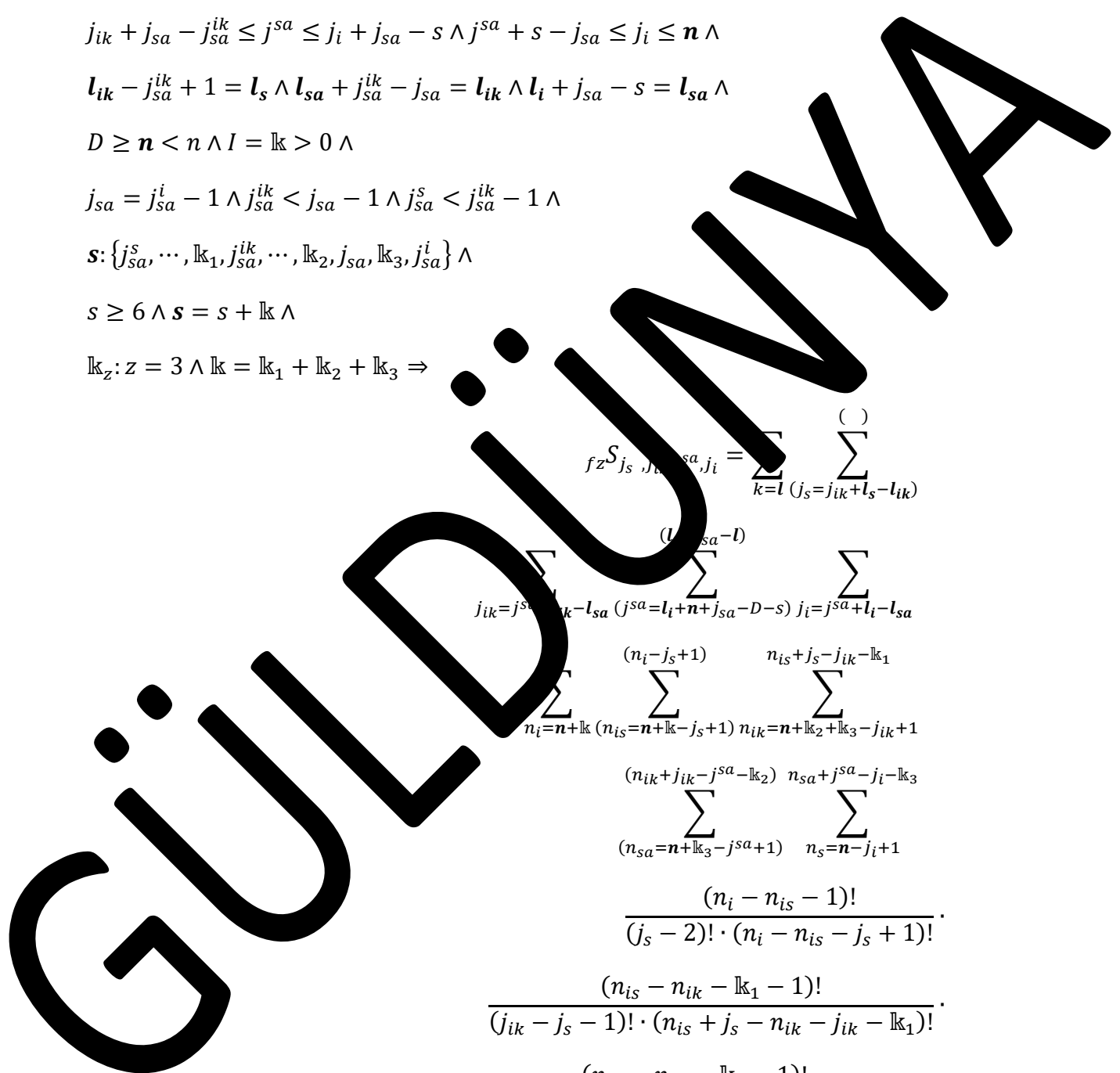
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}^{ik}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\ &\sum_{(l_{sa}=s-l)}^{(\cdot)} \sum_{(j_{ik}=j^{sa}-k-l_{sa})}^{(\cdot)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(\cdot)} \sum_{(j_i=j^{sa}+l_i-l_{sa})}^{(\cdot)} \\ &\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = n > 0 \wedge$$

$$j_s = j_{sa}^l - j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^l, \dots, j_s\} \wedge$$

$$s \geq 6, l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2+l_3-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_k+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{is}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq l_s \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$s \geq n - l_s \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{ik})}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_{sa}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{(n_{is}+j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-\mathbb{k}_3)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_i - j_{ik} - j^{sa} + 1 \wedge j_s + j^{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j^{sa} + 1 = l_s \wedge l_{sa} + j^{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j_{sa}=l_{ik}+n+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+j_{sa}^{ik}-j_{sa}}^{()}$$

$$\sum_{n_i=0}^n \frac{(n_i - n_{is} - 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

GÜLDENMYA

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}+l_{sa}-l_{sa}^{ik}} \sum_{j_{sa}^s=j_{sa}+l_s+l_{sa}^{ik}-D-1} \sum_{j_i=j_{sa}+l_i-l_{sa}} \sum_{n_i=n+l_{sa}+1}^{n+l_{sa}+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n+l_{sa}+1} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n+l_{sa}+1} \sum_{n_s=n-j_i+1}^{n+l_{sa}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{(l-l+1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l-l+1)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - l)!}{(D + l - n - l_i - 1)! (l_i - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s = j_{sa}^l - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, j_s\} \wedge$

$s \geq 6, j_s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_s=n-j_i+1} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j_s-j_i)!} \cdot \frac{(n_s-1)!}{(n+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > n+1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_s \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n+1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots \wedge l_s > D \dots \wedge n+1 \wedge$

$z \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+l_i-l_s}^{(\quad)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-n_{sa}-l_{k_1})}^{n_{is}+j_{sa}^{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-n_{sa}-l_{k_2})}^{n_{sa}+j^{sa}-l_{k_3}} \sum_{(j^{sa}+1)}^{n-j_i+1}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{sa} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = \dots + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} (j_{sa} = j_{ik} - l_{ik}) j_i = j_{sa} + j_{sa} - j_{ik} - \mathbb{k}_1$$

$$\sum_{n_i=0}^n (n_{is} = n + j_{sa}^{ik} - 1) n_{ik} = j_{ik} + 1$$

$$(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2) n_{sa} + j_{sa} - j_i - \mathbb{k}_3$$

$$(n_{sa} = n_{sa} - j_{sa} + 1) n_s = n - j_i + 1$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} (j^{sa}=j_{ik}+l_s-l_{ik}) j_i=j^{sa}+l_i-l_{sa}$$

$$\sum_{n_i=n}^n (n_i-1) \sum_{n_{is}=n+\mathbb{k}_1+1}^{n_s+j_s-j_{ik}-\mathbb{k}_1} n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n}^{j_{sa}^{ik}-l_{sa}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j_{sa}^i+l_i-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

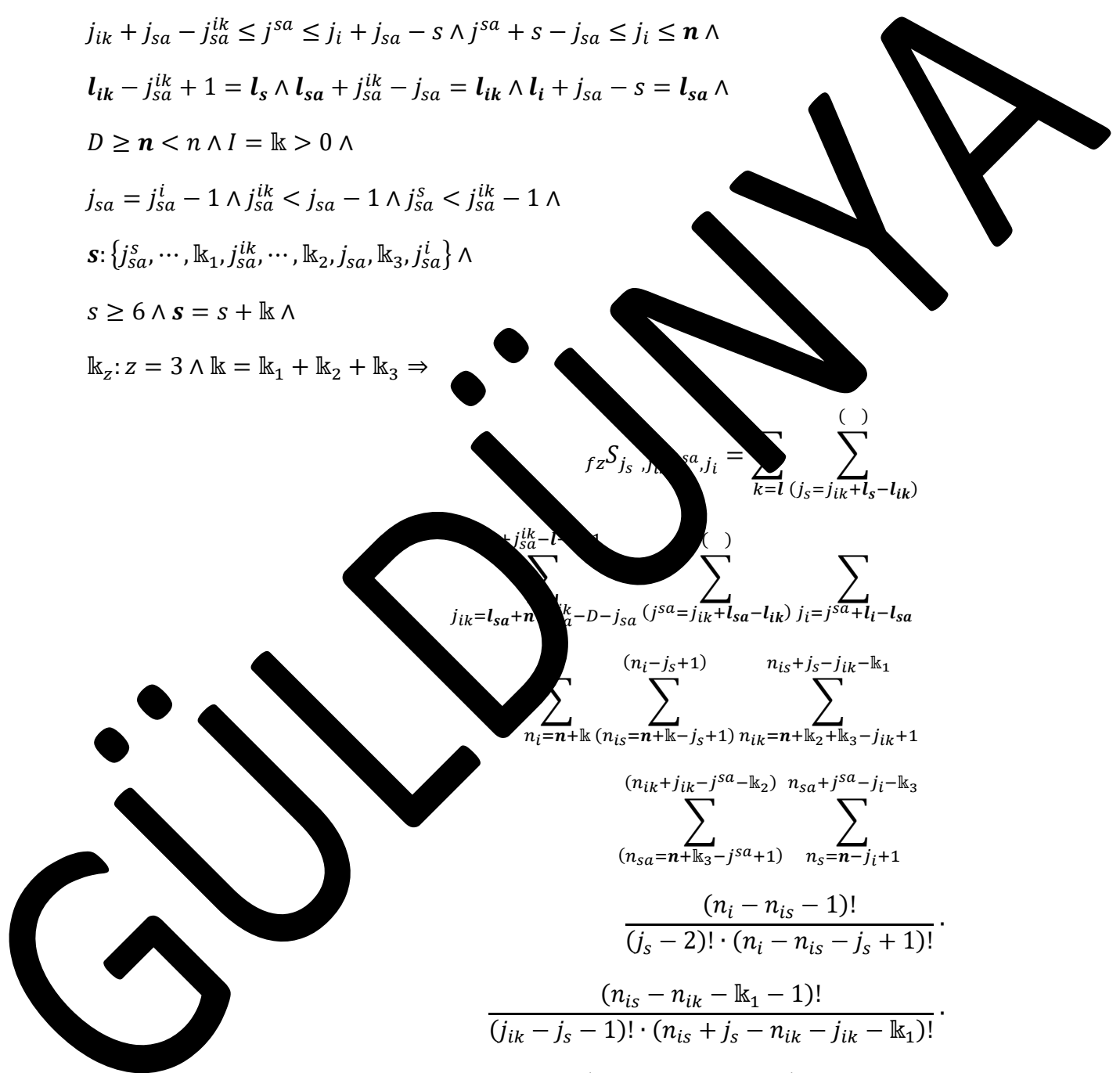
$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{k-l+1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \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}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = n - j_s > 0 \wedge$$

$$j_{sa} = j_{sa}^l - j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^l, \dots, j_s\} \wedge$$

$$s \geq 6, l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\binom{()}{j_i=j^{sa}+l_i-l_{sa}}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_s = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_s=n-j_i+1} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_{sa}+j_i-n_s+1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > n+1 \wedge$$

$$j_s \leq j_{ik}-j_{ik}+1 \wedge j_s+j_{sa}-1 \leq j_{ik} \leq j^{sa}+j_{sa}-j_s \wedge$$

$$j_{ik}-j_{sa}-j_{sa}^{ik} \leq j^{sa} < j_i+j_{sa}-s \wedge j^{sa}+s-j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik}-j_{sa}-1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i + j_{sa}-s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n+1 \wedge$$

$$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq \dots < n \wedge l_s > D \dots n+1$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{sa}+j_s-j_{ik}-l_{k_2})} \sum_{n_s=n-j_i}^{(n_s+n-j_i)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{\mathcal{S}}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(\cdot)} \sum_{i=j_{sa}^{ik}-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(n_{ik} - \mathbb{k}_1 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{l-s+2} \binom{l-s+2}{k} j_{ik}^{l-s+2-k} j_{sa}^{k-1} = \sum_{k=l}^{l-s+2} \binom{l-s+2}{k} j_{ik}^{l-s+2-k} j_{sa}^{k-1} \\ & \sum_{j_{ik}=l_{ik}-l_s}^{n-l_{ik}+1} \sum_{j_{sa}=l_{sa}-l_{ik}}^{n-l_{sa}+1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n-l_i+1} \sum_{n_{is}=n+l_{ik}-j_s+1}^{n-l_{is}+1} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\ & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots, j_i\}$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \geq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-l_{k_2}-l_{k_3}-j_{ik}+1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{is}+j_s-j_{ik}-l_{k_1})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-l-s+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{sa}=j_{ik}+k_1)} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{(j_i=j_{sa}+l_i-l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-n)}^{(n_{is}+j_s-n)}$$

$$\sum_{(n_{ik}-j_{sa}-k_1)}^{(n_{ik}-j_{sa}-k_1)} \sum_{(n_{sa}-j_i-k_3)}^{(n_{sa}-j_i-k_3)}$$

$$\sum_{(n_{sa}-j_i-k_3)}^{(n_{sa}-j_i-k_3)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

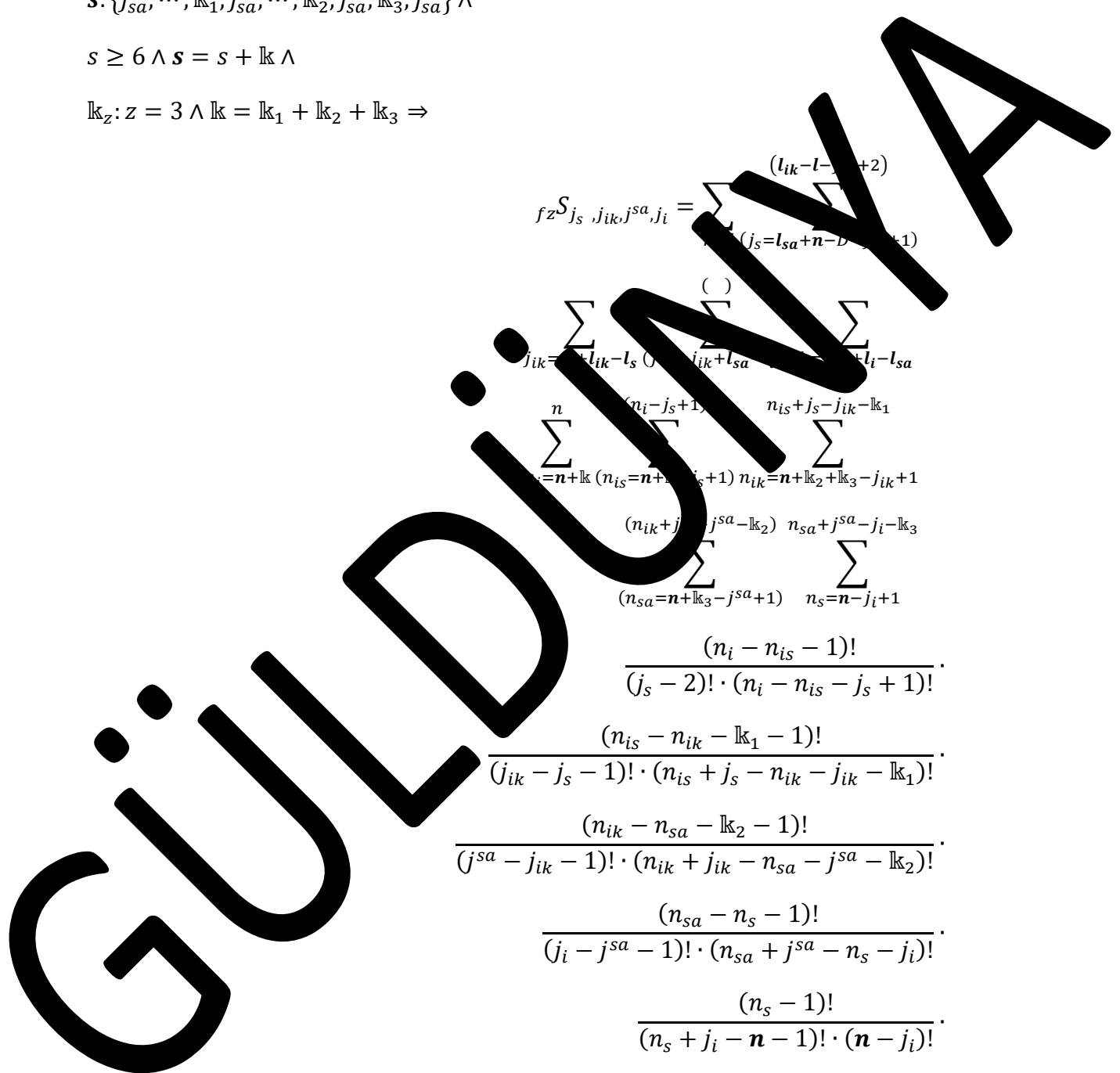
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \frac{(l_{ik} - l_s + 2)}{(j_s = l_{sa} + n - D + 1)} \cdot \sum_{j_{ik} = l_{ik} - l_s}^{()} \sum_{j_{sa} = j_{sa} - 1}^{()} \sum_{j_i = l_i - l_{sa}}^{()} \frac{(n_i - j_s + 1)}{\sum_{n_i = n + k}^{()} (n_{is} = n + k_1 + j_s + 1)} \cdot \frac{n_{is} + j_s - j_{ik} - k_1}{\sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{()}} \cdot \frac{(n_{ik} + j_{sa} - j_{sa} - k_2)}{\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{()}} \cdot \frac{n_{sa} + j_{sa} - j_i - k_3}{\sum_{n_s = n - j_i + 1}^{()}} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z = \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_s}^n \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}}^{n+l+1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{n+l+1} \frac{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}=n+k_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-k_3}{n_s=n-j_i+1} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

GÜLDÜNYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{k=l}^{(l_i - l - s + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)} f z^D j_s^{j_{sa}^{ik}}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, \dots, n\}$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2 - 1)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$z \bullet j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_k - j_{sa} - 1 = l_s \wedge l_{sa} \bullet j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_{sa} = j_{sa}^{l_s} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{l_{sa}-l-j_{sa}+2} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \geq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i-1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > l - n + 1 \wedge$$

$$2 \leq l \leq D \wedge l_s + s - n - l_i \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

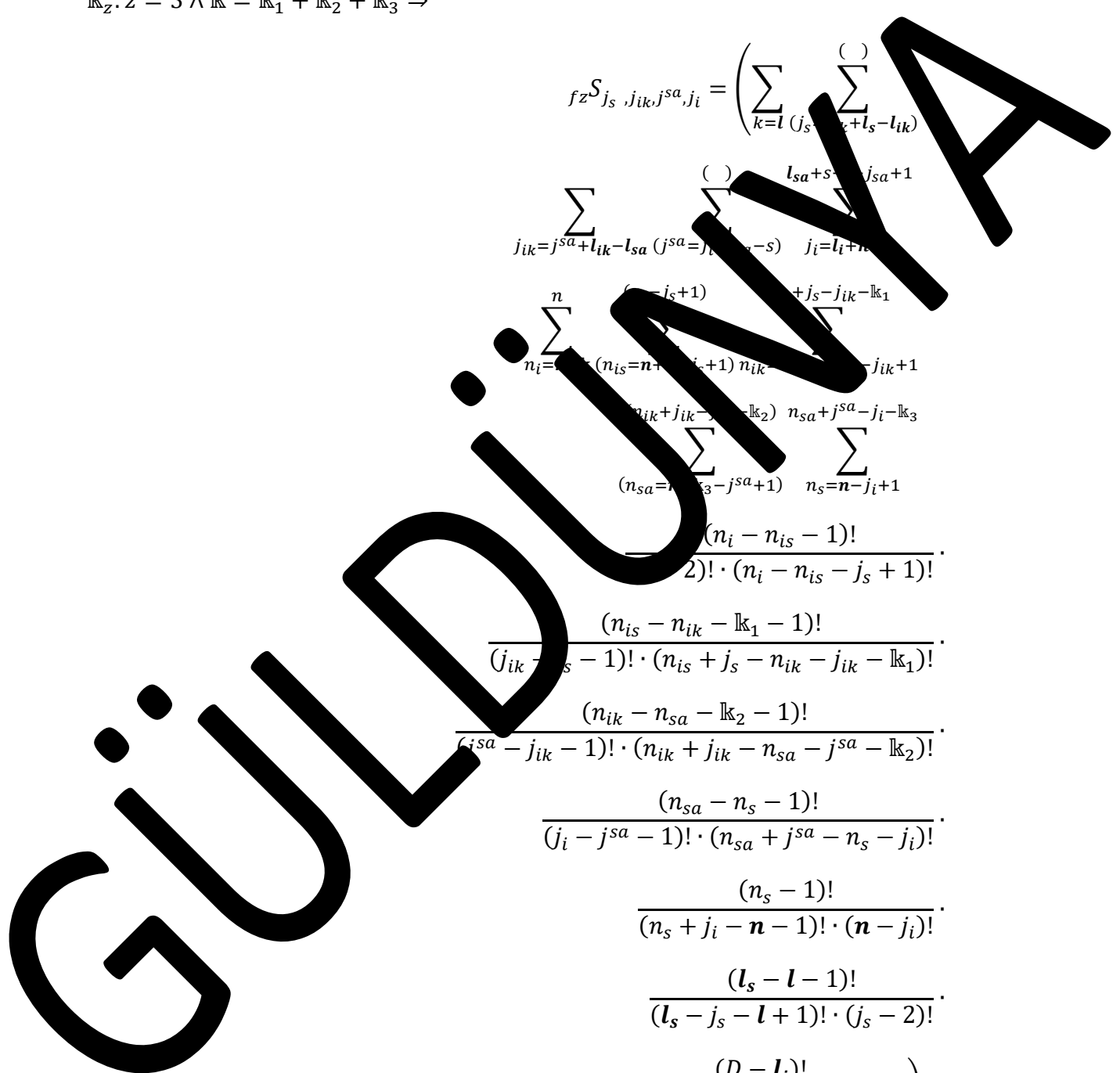
$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{zS}^{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_{ik}-s)}^{()} \sum_{j_i=l_i+l_{ik}}^{()} \sum_{n_i=0}^{(j_s+1)} \sum_{(n_{is}=n_i+l_{ik}+1)}^{(j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_{ik}+j_{ik}-n_{sa}-\mathbb{k}_2)}^{(j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_{sa}=n_{ik}-j_{sa}+1)}^{(j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_s=n-j_i+1}^{(j_s-j_{ik}-\mathbb{k}_1)} \frac{(n_i - n_{is} - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) + \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1) \quad l_{sa}+s-l-j_{sa}+1} \sum_{(j^{sa}=l_{sa}+n-D) \quad j_i=l_i+n-D} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1) \quad n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \quad n_{sa}+j^{sa}-j_i} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1) \quad n_s=n-j_i+1} \\
 & \frac{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1) \quad l_i-l+1} \sum_{(j^{sa}=l_{sa}+n-D) \quad j_i=l_{sa}+s-l-j_{sa}+2} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1) \quad n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \quad n_{sa}+j^{sa}-j_i-l_{k_3}} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1) \quad n_s=n-j_i+1}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = 1 + \mathbb{k} \wedge$$

$$s = 1 + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)} \sum_{l_i-l+1} \\
& \sum_{n_i=n+l_k} \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s-j_i+1} \\
& \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-n_{ik}-l_{k_1}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i > D - l_i + 1 \wedge$$

$$2 \leq l_s + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}} \binom{(\quad)}{\quad} \sum_{(j_{sa}=j_i+j_{sa})} \binom{(\quad)}{\quad} \sum_{(i=l_i-D)} \binom{(\quad)}{\quad} \sum_{(l_{ik}=l-j_{sa}+1)} \binom{(\quad)}{\quad}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}=k_2+k_3-j_{ik}+1)}^{(n_{ik}=k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=j_{sa}-k_2)}^{(n_{ik}=j_{sa}-k_2)} \sum_{(j_i-k_3)}^{(j_i-k_3)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

GÜLDÜŞÜMÜYA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^s \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + l - l_{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > D - n \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = l + \mathbb{k} \wedge$$

$$l = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=j_i+1)}^{n_{sa}+j^{sa}-j_i-l} \\
& \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-j_s+1)!} \cdot \\
& \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_{is}-j_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
& \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l = s - n + l + 1 \wedge$$

$$2 \leq l \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{l_{ik}=l-j_{sa}^{ik}+1} \binom{(\quad)}{\quad} \sum_{i=l_i} \binom{(\quad)}{\quad} \sum_{n_i=n+k} \binom{(\quad)}{\quad} \sum_{(n_i-j_s+1)} \binom{(\quad)}{\quad} \sum_{n_{is}+j_s-j_{ik}} \binom{(\quad)}{\quad} \sum_{(n_{ik}-j_{sa}-k_2)} \binom{(\quad)}{\quad} \sum_{(n_{ik}-j_i-k_3)} \binom{(\quad)}{\quad} \sum_{(n_{sa}+k_3-j_{sa}-1)} \binom{(\quad)}{\quad} \sum_{n_s=n-j_i+1} \binom{(\quad)}{\quad} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{is}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \binom{(\quad)}{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_i < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{\quad}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i \geq D - l + 1 \wedge$$

$$2 \leq l \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

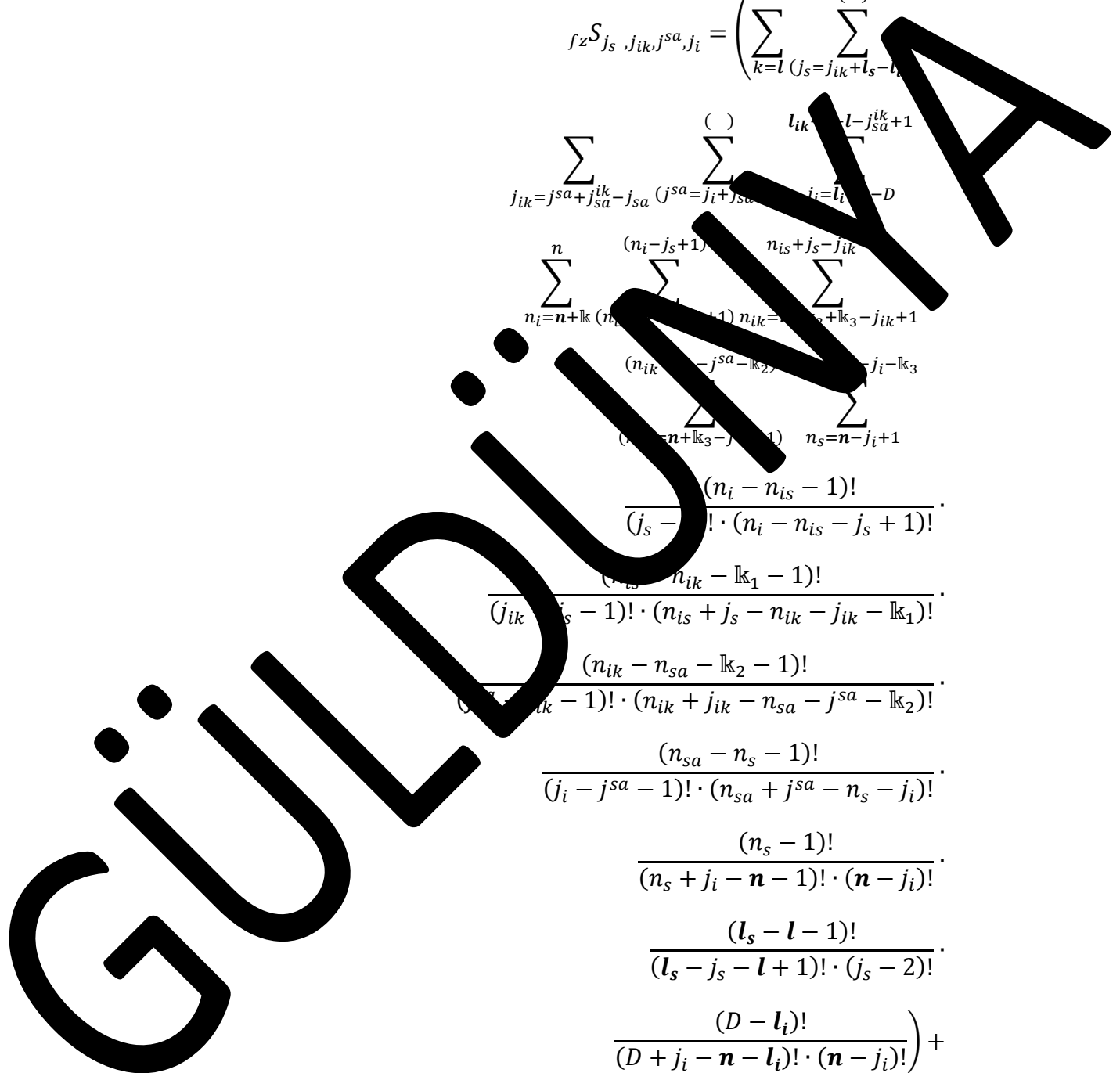
$$f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{l_{ik}=l-j_{sa}^{ik}+1} \binom{(\quad)}{\quad} \sum_{j_i=l_i-j_{sa}^{ik}-D} \binom{(\quad)}{\quad}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{\quad} \sum_{n_{is}=n_{ik}+k_3-j_{ik}+1} \binom{(n_{is}+j_s-j_{ik})}{\quad} \sum_{(n_{ik}-j_{sa}-k_2)} \binom{(n_{ik}-j_{sa}-k_2)}{\quad} \sum_{(n_s=n-j_i+1)} \binom{(n_s-n-j_i+1)}{\quad}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{is}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \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} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=l}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\substack{j^{sa}+j_{sa}^{lk}-j_{sa}-1 \\ j_{ik}=l_{ik}+\mathbf{n}-D}} \sum_{\binom{D-l_i}{j^{sa}=j_i+j_{sa}-s}} \sum_{\substack{l_{ik}+s-l-j_{sa}^{lk}+1 \\ j_i=l_i+\mathbf{n}-D}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \frac{(l_i - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + l_i - s \wedge j^{sa} + s - j_s \leq j_i \leq j_s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: (j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{lk}, \mathbb{k}_3, j_s^l)$

$s \geq 0, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2 - 1)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq l_s \leq D + l_s + s - n - l_i \wedge$$

$$1 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j^{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}+1)! \cdot (n_s=n-j_i)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!} \\
 &\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \Big) + \\
 &\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j^{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j^{sa}-D-1)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})}^{l_i-l+1} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_i)!}{(D + j_s - n - l_i)! \cdot (j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik} + 1$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s > 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)}^{l_i - l + 1} \sum_{j_i = l_i + n - D}^{n} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq l \leq D + l_s + s - n - 1$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ls} - 1 \leq j_{ik} \leq j_s^a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^i, \mathbb{k}_1, j_{sa}^i, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = 1 + \mathbb{k} \wedge$$

$$z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_i-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = n + l_s - l_{ik})}^{()} \sum_{j_{ik} = n + j_{sa}^{ik} - D - 1}^{l_s + l - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + s - l + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_i - j_{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_s^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^{ik}, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq l \leq D + l_s + s - n - l_i$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \wedge$$

$$s \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^i+1)}^{()} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i)}{n_s=n-j_i+1}} \\
 & \frac{\binom{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!}}{\binom{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(j_s-n_{is}-j_{ik}-k_1)!}} \cdot \\
 & \frac{\binom{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}}{\binom{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}} \cdot \\
 & \frac{\binom{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}}{\binom{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}} \cdot \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +
 \end{aligned}$$

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-k_3)}{n_s=n-j_i+1}}
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n_s - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{(l_s)} \sum_{j^{sa}+l_{ik}-l_{sa}}^{(l_s)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLÜM

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_i - j_{sa} + 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_s^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^{ik_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i - l + 1)} \sum_{j_{ik} = j_{sa}^{ik} + l_{ik} - l_{sa}}^{(j^{sa} = j_i + l_{sa} - l_i)} \sum_{j_i = l_i + n - D}^{(l_i - l + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_s^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_s \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq l < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} = j_{sa}^i \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$s \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \binom{(\quad)}{\sum_{j_i=l_i+n-D}^{l_s+s-l}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{(j_i+j_{sa}-s-1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i - l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{(j_s=j_{ik}+l_s-\dots)}^{+j_{sa}^{ik}-l} \sum_{(l_{sa}=l+1)}^{(l_{sa}-l+1)} \sum_{(j_i=l_s+s-l+1)}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l)!}{(n - l)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{\substack{(j_s = j_{ik} + l_{sa} - 1) \\ (j_{ik} = l_s + n + j_{sa}^{ik} - 1) \\ (j^{sa} = j_{sa} - s)}} \binom{j^{sa} - j_{sa} - 1}{j_{ik} - j_{sa} - 1} \binom{j_s - l}{j_i - l_i + n - D}$$

$$\sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_i - j_s} \sum_{n_{is} = j_s - j_{ik} - k_1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} < j^{sa} + j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n < n \wedge \mathbb{k} = \mathbb{k} > 0$

$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$

$s; \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = j_{sa} - \mathbb{k} \wedge$

$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=l_s+n-D)}^{l_s+s-l} \right)$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(j_i+j_{s_a}-s-1)} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{l_s+s-l} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j^{sa} - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{l_s} \sum_{j^{sa}+l_{ik}-l_{sa}}^{l_{sa}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j^{sa} = j_i - l_i)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(l_i + n - D)}^{(l_s + s - l)}$$

$$\sum_{(i = n + k)}^n \sum_{(n_{is} = n + k_1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_{is} + j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j^{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_i}^{s, j_i} &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \\ &\sum_{k=j_{sa}^{ik} + l_{ik} - l_{sa}}^{(l_{sa} - l + 1)} \sum_{(j^{sa} = l_{sa} + n - D)}^{l_i - l + 1} \sum_{j_i = l_i + n - D} \\ &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\ &\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i)!}{(D + l_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^k+1)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^k-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(l_{sa} + j^{sa} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{l_s=0}^{(l_s-1)} \sum_{j_i=0}^{(n-D)-j_i} \sum_{l_{ik}=0}^{l_{ik}-l+1} \sum_{j_i+l_{sa}-l_i}^{()} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

$$\sum_{n_{is}=n+l_{ik}-j_s+1}^{n} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_s - l_i)} \sum_{j_i = l_i + n - j_s}$$

$$\sum_{n_i = n + k_1}^n \sum_{n_{is} = n + k_2 - j_{ik} - k_1}^{j_s} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n - j_{sa} - j_{ik} - j^{sa} - j_i - k_3)}^{(n_{sa} = n - j_{sa} - j_{ik} - j^{sa} - j_i - k_3)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

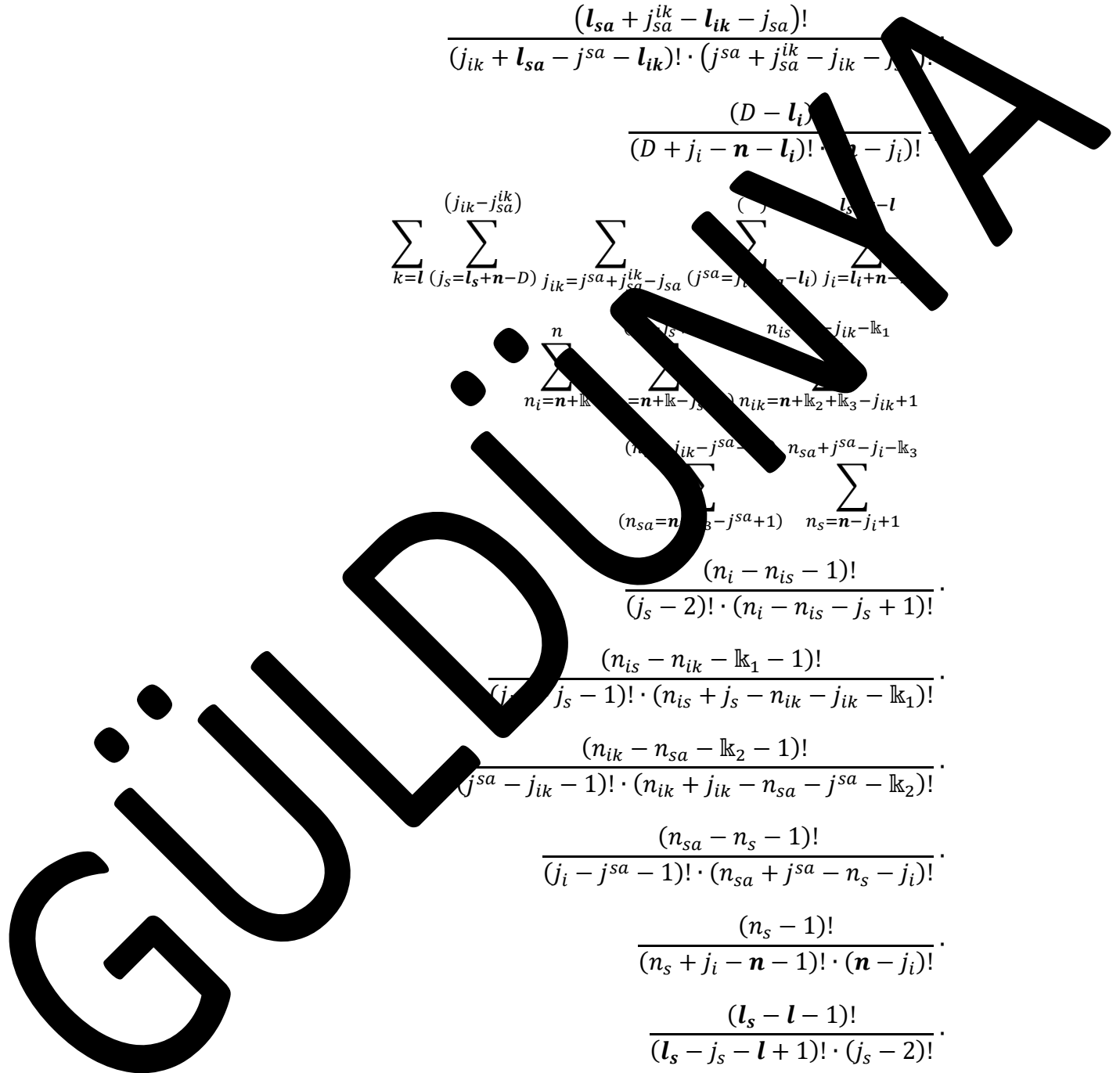
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS} j_s, j_i, j_{sa}, j_i &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(D - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{sa} - j_{sa} - s > 0 \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$

$s \cdot 6 \wedge s = \dots \wedge \mathbb{k} \wedge$

$\mathbb{k}_z \cdot 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}} \sum_{(j_{sa} = l_i + n + j_{sa} - D - s)}^{(l_{sa} - l + 1)} \sum_{j_i = j_{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}=j^{sa}+l_{ik})} \sum_{(j^{sa}=l_s)} \sum_{(n-D)} \sum_{(j_i=l_i+n-D)} \sum_{(n+j^{sa}-l)} \sum_{(l+1)}$$

$$\sum_{(n_i=n+...)} \sum_{(n_i-j_s)} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k} \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)} \binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} \right) + \\
 & \sum_{j_{ik}=j_{ik-lsa}}^{(n_{ik}-j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}+1}^{(j_i-j^{sa}+1)} \sum_{j_s=j_s-l+1}^{(j_s-l+1)} \sum_{j_{ik}=j_{ik-lsa}}^{(n_{ik}-j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}+1}^{(j_i-j^{sa}+1)} \sum_{j_s=j_s-l+1}^{(j_s-l+1)} \\
 & \sum_{n+l}^{(n_{is}=n+l-j_s+1)} \sum_{n_{ik}=n+l_2+l_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_1)} \sum_{n_{sa}=n+l_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{D}{l}} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})} \sum_{l_i = l_i + n - \dots} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = \dots}^{n_{is} + j_s - k - k_1} \sum_{j_{ik} + 1} \\
 & \sum_{(n_{ik} + j_{ik} - \dots)}^{(n_{ik} + j_{ik} - \dots)} \sum_{(j^{sa} + 1)}^{n_{sa} + j^{sa} - \dots} \sum_{= n - j_i + 1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - \dots - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{\dots - n_{is} - k_2 - 1)!}{(j^{sa} - \dots - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - \dots - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

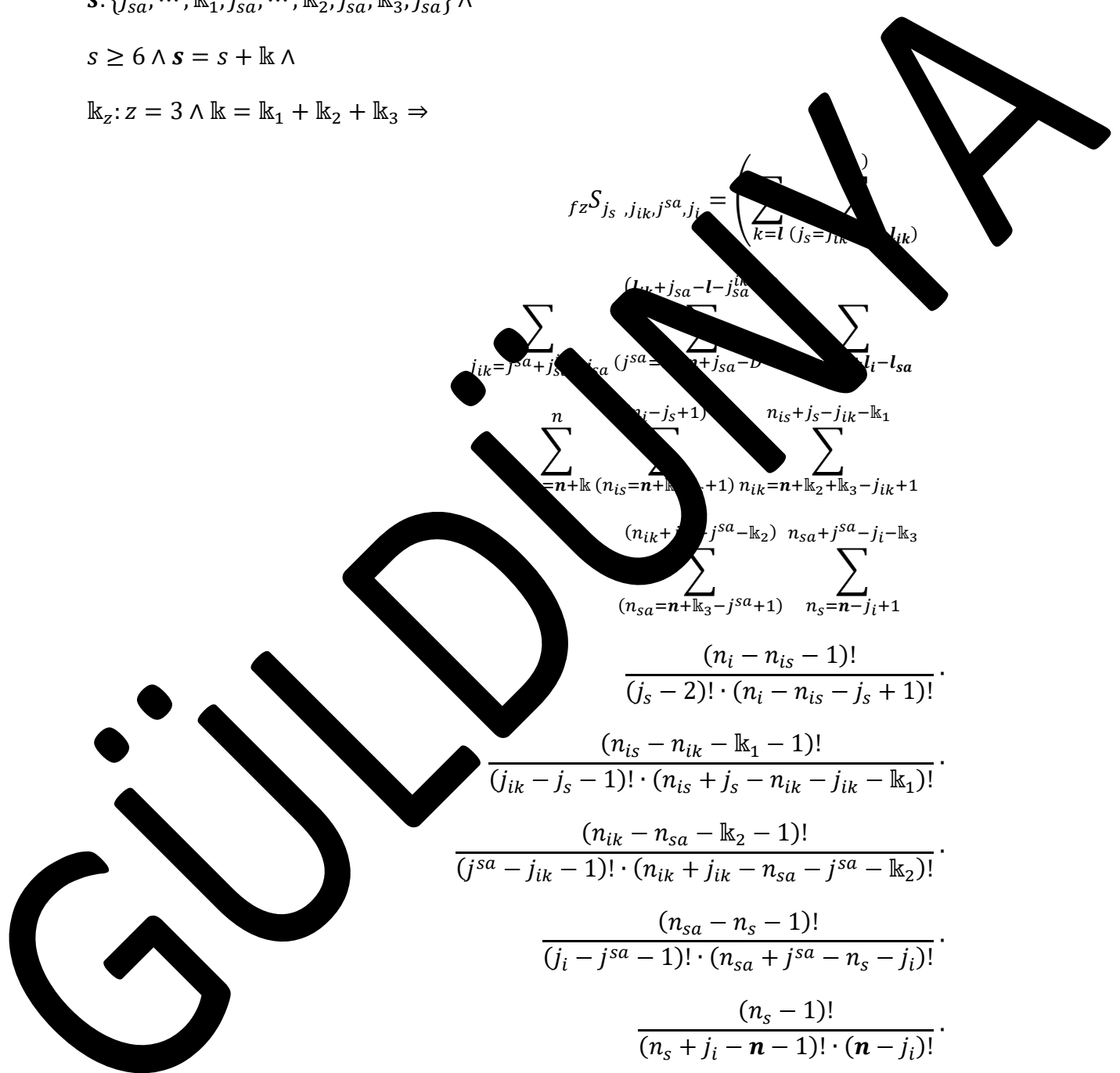
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \binom{l_s + j_{sa} - l - j_{sa}^{ik}}{j_s - j_{ik}} \binom{l_i - l_{sa}}{j_{sa} - j_{ik} - k_1} \binom{n_i - j_s + 1}{n_{is} + j_s - j_{ik} - k_1} \binom{n_{is} + j_s - j_{ik} - k_1}{n_{ik} = n + k_2 + k_3 - j_{ik} + 1} \binom{(n_{ik} + j_{sa} - k_2)}{(n_{sa} = n + k_3 - j_{sa} + 1)} \binom{n_{sa} + j_{sa} - j_i - k_3}{n_s = n - j_i + 1} \right) \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)^+$$



$$\left(\sum_{k=l} \sum_{j_s=j_{ik}+l_s-l_{ik}} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_s+1)! \cdot (n_s=n-j_i+1)!}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{ik} - n_{is} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{j_s=j_{ik}+l_s-l_{ik}} \binom{(\quad)}{\quad} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

GÜLDÜZMAYA

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^l \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^{lk}, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

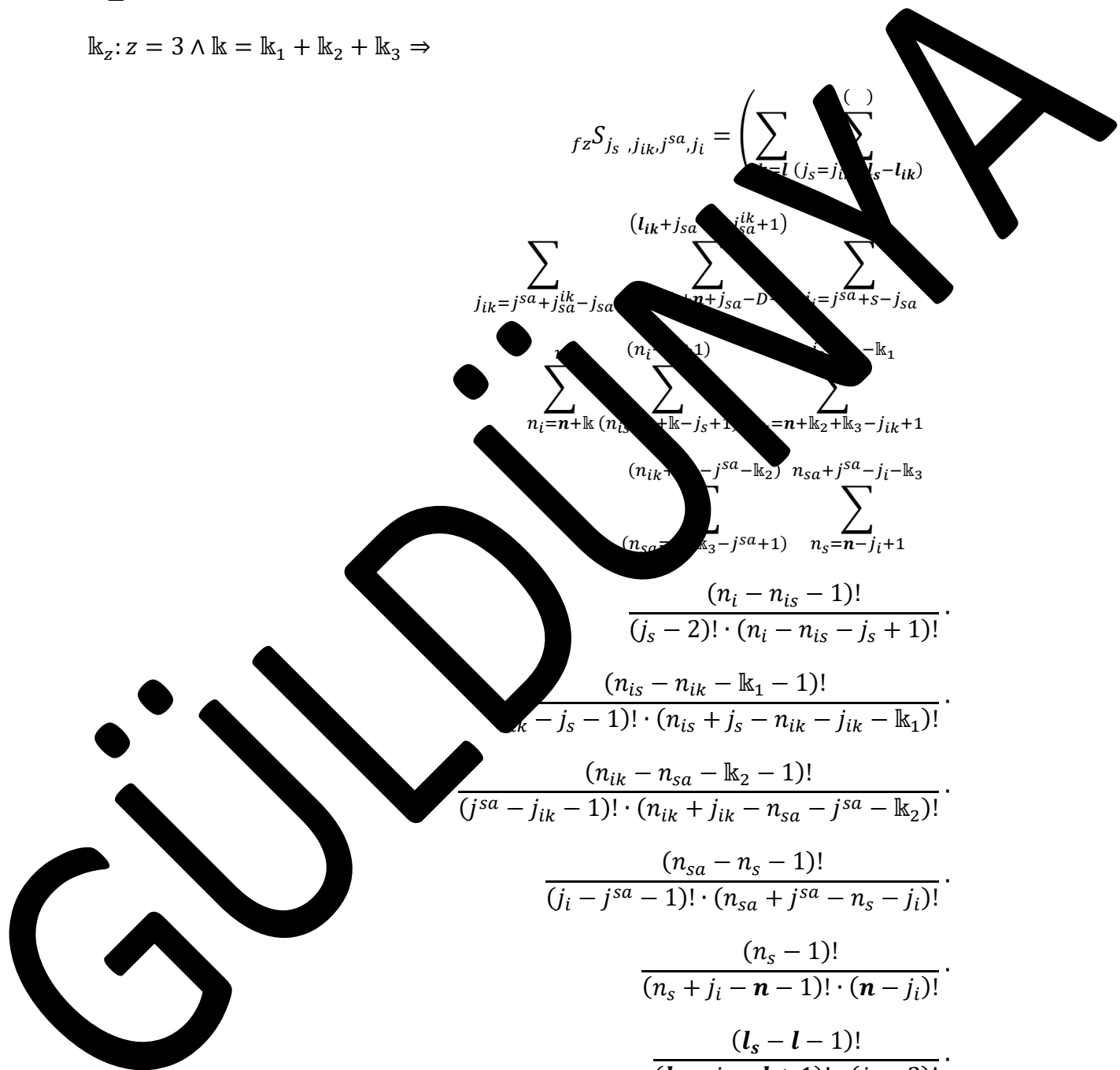
$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+l}^{()} \sum_{j_{sa}=j_{sa}^{ik}+1}^{()} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}, j_{sa}^{ik}+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{n_{is}=n+\mathbb{k}+j_s-1}^{(n_{is}-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



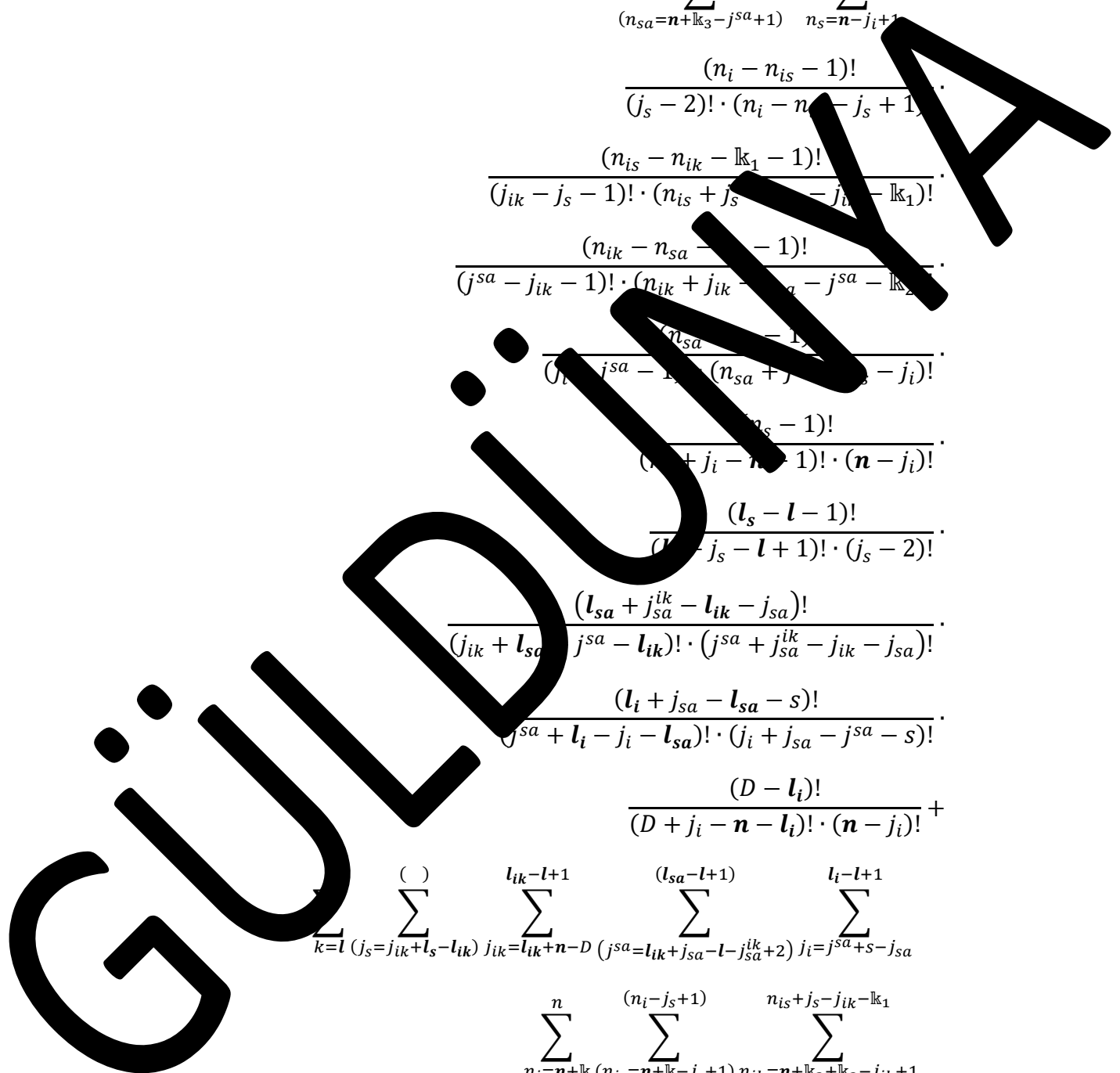
$$\begin{aligned}
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots \\
 & \dots \frac{(n_{sa}-n_s-1)!}{(j_s-2)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{sa}-n_s-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^l \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{l_{ik}-l+1}^{l_{ik}-l+1} \sum_{l_{sa}-l+1}^{l_{sa}-l+1} \sum_{l_i-l+1}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{\binom{j^{sa} + j_{sa}^{ik} - 1}{j_{ik} = j_{ik} + l_s - l_{ik}}} \sum_{j_{ik} = j_{ik} + j_{sa}^{ik} - D - 1}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZ

AYLA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^l\}$

$s = 6 \wedge s = k_1 + k_2 \wedge$

$k_2 = 3 \wedge k = k_1 + k_2 + k_3 = 6$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_s+j_{sa}-l) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{(\cdot)}{(\cdot)}} \sum_{(j_s=j_{ik}+l_s-l_i)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_{sa}=l_s+n_{is}-D-1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{(n_i=n+1)}^n \sum_{(n_{is}=n+1)}^{(n_i-j_s-1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

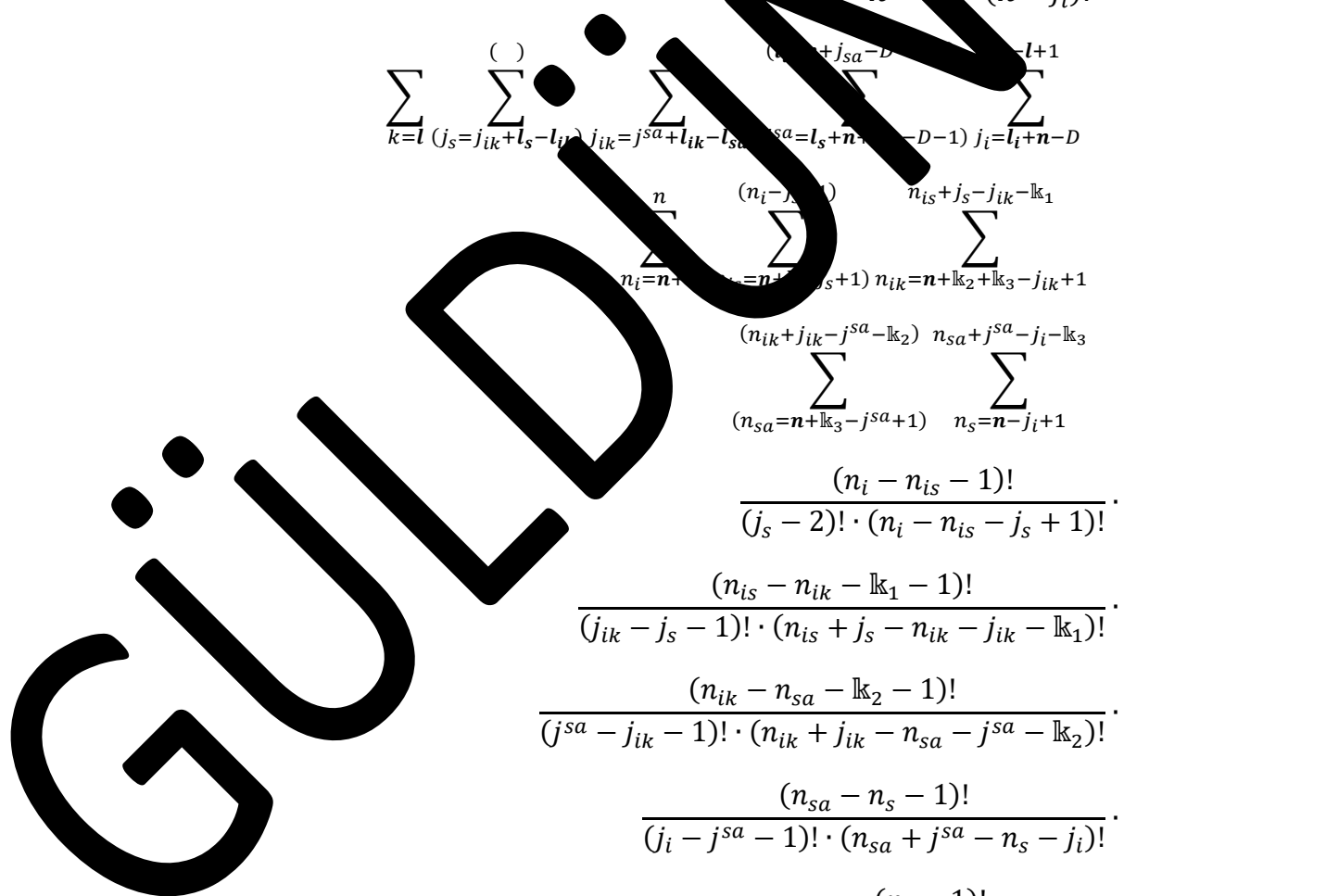
$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{ik=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k} \sum_{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} \right) + \\
 & \sum_{j_{ik}=l_s}^{j^{sa} + j_{sa} - j_{sa} - 1} \sum_{j_{sa}=j_{sa} - D - 1}^{j_{sa} - 1} \sum_{j_i=j^{sa} + l_i - l_{sa}}^{(l_s + j_{sa} - D)} \sum_{j_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{n + \mathbb{k}_1}^{(n_i - j_s)} \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{l_s+j_{sa}^{ik}-l} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{n} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_i-j_s+1)} \sum_{n_i=n+k}^{n_{is}+j_s-l_{ik}-k_1} \sum_{(n_{ik}=n+k-j_s+1)}^{(n_{ik}+j_{ik}-j_s-k_2)} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{n_{sa}+j_{sa}-j_i} \sum_{(j_i=n+j^{sa}+1)}^{n-j_i+1} \frac{(n_i - n_{is} - j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_{ik} - l_{ik} - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{is} - l_{ik} - k_1 - 1)!}{(j^{sa} - l_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_i=n+1)} \sum_{(n_{is}=n+k_1+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDENMYA

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \right)$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + l_k + l_{k_3} - j_s + 1)}^{(n_{is} + j_s - l_{k_1})}$$

$$\sum_{(n_{sa} = n + l_k - j_s + 1)}^{(j_{ik} - j^{sa} - l_{k_2})} \sum_{(n_{sa} + j^{sa} - j_i - l_{k_3})} \sum_{j_i + 1}$$

$$\frac{(j_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{sa} - l_{k_1} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - l - s + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - 1)!}{(j_s - 1)! \cdot (n_{sa} + j_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D > n < n \wedge l_s > n + 1$

$D + l_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_{z^S}^{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j_{sa}+l_i-l_s}^{(l_i+j_{sa}-l-s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-l_{k_1})}^{(n_{is}+j_{ik}-l_{k_1})} \sum_{(n_{ik}+j_{ik}-l_{k_2})}^{(n_{ik}+j_{ik}-l_{k_2})} \sum_{(n_{sa}+j_{sa}-l_{k_3})}^{(n_{sa}+j_{sa}-l_{k_3})}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\cdot \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{sa} - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - l_{k_2})!}$$

$$\cdot \frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(l_s + j_{sa} - l)} \binom{l_s + j_{sa} - l}{k} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{(n + j_{sa} - j_{sa}^{ik} - j_{sa} + s - j_{sa})} \sum_{j_{sa}^s = n + k}^{(n_i - j_s + 1)} \sum_{j_{sa}^{ik} = n + k}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa} = n + k}^{(n_{ik} + j_{sa} - k_2)} \sum_{j_i = n_s + k}^{(n_{sa} + j_{sa} - j_i - k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_i+1)}^{n_{ik}+j_{ik}-j^{sa}} \sum_{(n_s=n-j_i)}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - k_1 - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - n_{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \sum_{j_{i_k}=l_{i_k}+n-D}^{l_s+j_{s_a}^{i_k}-l} \sum_{(j^{s_a}=l_s+j_{s_a}-l+1)}^{(l_{s_a}-l+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i-l+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n - 1)!}{(n_s + \dots - n - 1)! \cdot \dots - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l=1}^{j^{sa} + j_s^{ik} - j^{sa} - 1} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{l_{ik} + n - D}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^l\}$

$s = 6 \wedge s = k_1 + k_2 \wedge$

$k_2 = 3 \wedge k = k_1 + k_2 + k_3 = 6$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}$$

$$\begin{aligned}
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
& \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right) \\
& \sum_{i_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_s - l + 1)! \cdot (j_i + j_s - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{(j_{ik} - j_{sa} - 1)} \sum_{j_s=0}^{(n + j_{sa} - l_s - 1)} \sum_{j_{ik}=j_s}^{l_i - l + 1} \sum_{l_{sa}=0}^{(n - j_s - 1)} \sum_{j_i=l_i + n - D}^{n - j_s - 1} \\
 & \sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{n} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{is} - j_s + 1)} \sum_{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l)} \sum_{(j^{sa}=l_s+j_s-l+1)}^{(l_i-1)} \sum_{j_i=j^{sa}+s-1}^{(n-j_s-j_{ik}-l_{k_1})} \\
 & \sum_{n_i=n-j_s-j_{ik}-l_{k_1}}^n \sum_{(n_{is}=n+l_{k_1}-1)}^{(n-j_s-j_{ik}-l_{k_1})} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n-j_s-j_{ik}-l_{k_1})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k - k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k}$$

$$\sum_{(n_{sa} = n + k - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i - k_3}^{n_{sa} + j_s - j_i - k_3}$$

$$\frac{(n_i - j_s - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - k_1 - 1)! \cdot (n_i - j_s + 1)!}$$

$$\frac{(n_{ik} - k_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{(s)} \sum_{j_s=j_{ik}+j_{sa}^{ik}+1}^{(s)} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+l-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+l-1)} \sum_{n_i=n+\mathbb{k}}^{(n_i+l-1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+l-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+l-1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{sa}+l-1)} \sum_{n_s=n-j_i+1}^{(n_s+l-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZYA

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(j^{sa}-j_i-l_{k3})} \sum_{(n_{sa}=n+l_{k3}-j^{sa})}^{(j^{sa}-j_i-l_{k3})} \sum_{n_s=n-j_i+1}^{(n_{sa}-n_s-1)!} \frac{(j_s - 1)! \cdot (n_i - j_i + 1)!}{(n_{ik} - n_{sa} - l_{k1} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - l_{k2} - 1)!}{(n_{ik} - n_{sa} - j^{sa} - l_{k2})! \cdot (n_{ik} - n_{sa} - j^{sa} - l_{k2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

GÜLDENWA

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^l \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_i < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\begin{aligned}
& \sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j_{sa}-j_i} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n+l_s \wedge l_s > D-n+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j_{sa} \leq j_i+j_{sa}-s \wedge j_{sa}+s-j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik}-j_{sa}^{ik}+1 = l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i+j_{sa}-s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(j_s=j_{sa}^{ik}-l_{ik})} \sum_{i=1}^{(j_s=j_{sa}^{ik}-l_{ik})} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-n_{is}-1)} \sum_{n_{is}=n_{ik}+\mathbb{k}-j_s+1}^{(n_{is}-n_{ik}-\mathbb{k}_1-1)} \sum_{n_{sa}=n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{sa}-n_{sa}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}-n_{sa}-\mathbb{k}_3-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+j_{ik}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_1}-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1}-1)!}{(n_{sa}=n+l_{k_3}-j_{ik}-1)! \cdot (n_s=n-j_i+j^{sa}-1)!} \cdot \frac{(n_s-n_{ik}-l_{k_1}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-1)!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-s-1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (j_i + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j^{sa} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)
\end{aligned}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} + j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \geq 3 \wedge \{ \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i \} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-l_{k_1})}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_1}-j_{sa}+j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j_{sa}-1)! \cdot (n_s=n-j_i+1)!}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{ik}-n_{is}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{l_i} \sum_{j_s=j_{sa}-l_{ik}}^{(j_s=j_{sa}-l_{ik})} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{(j_{ik}=l_i+n+j_{sa}^{ik}-D)} \sum_{j_{sa}=j_{ik}+l_{sa}-1}^{(j_{sa}=j_{ik}+l_{sa}-1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{(j_i=j_{sa}+s-j_{sa})} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k})} \sum_{n_{ik}=n+\mathbb{k}-j_s+1}^{(n_{ik}=n+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}^{ik}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}+1)! \cdot (n_s=n-j_i-k_3)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_s-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDENKAYA

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{()} (j_s = j_{ik} + l_s - l_{ik}) \\ &= \sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{()} \sum_{n_i=j_i+l_{sa}+l_{sa}^{ik}-l_{sa}}^{()} \sum_{n_{is}=n+l_{sa}-j_s+1}^{()} \sum_{n_{ik}=n+l_{sa}+l_{sa}^{ik}-j_{ik}+1}^{()} \\ &= \sum_{(n_{sa}=n+l_{sa}^{ik}-j_{sa}+1)}^{(n_{sa}=n+l_{sa}^{ik}-j_{sa}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &= \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ &= \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ &= \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \\ &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} S_{i,j} &= \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\ &= \sum_{l_{ik}-l_{sa} (j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\ &= \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1) (n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &= \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &= \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &= \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_s + n + s - D - 1}^{l_s + s - l}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_{sa}+s-l-j_{sa}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{sa} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-l}^{j_i=l_i+n-D}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{n_{s_i}=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle D \leq n+1$$

$$j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{ik}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \frac{(n_{ik}+s-j_{sa}^{ik}+1)}{(j_s-j_{ik}-l)! \cdot (n_{is}+j_s-j_{ik}-l)!} \cdot \frac{(n_i-j_s+1)}{(n_{ik}-j_{sa}^{ik}-l)!} \cdot \frac{(n_{is}+j_s-j_{ik})}{(n_{ik}+j_{ik}-l)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-j_{ik}-1)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{()} (j_s = j_{ik} + l_s - l_{ik}) \\ &= \sum_{j_{ik}=j^{sa}-l_{sa}}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_i-l+1} \\ &= \sum_{n_{i_s}=n+k-j_s+1}^n \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1} \\ &= \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{i_k}+j_{i_k}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &= \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ &= \frac{(n_{i_s} - n_{i_k} - k_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{i_k} - k_1)!} \cdot \\ &= \frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{sa} - j^{sa})!} \cdot \\ &= \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\ &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} S_{i,j} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\ &= \sum_{l_{ik}=l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_{sa}+s-l-j_{sa}+1} \\ &= \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &= \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_{ik} + n + s - D - j_{sa}^{ik}}^{l_s + s - l}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_s + n + s - D - 1}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s + j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_s+n+s-D-1}^{l_{sa}+s-l-j_{sa}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+l_k} \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1} \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-1)}{n_s=n-j_i+1}} \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$$D \geq 6 \wedge n \wedge l_s > D \wedge n > 1 \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$n \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l}^{(l_i+j_{sa}-l-s+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s = n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{(j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa})}^{(\cdot)} \sum_{(j_{sa}=l_{ik}+n+j_{sa}-l)}^{(\cdot)} \sum_{(j_i=j_{sa}^{ik}-l_{sa})}^{(\cdot)} \sum_{(n_i=n+k)}^{(\cdot)} \sum_{(n_i-j_s+1)}^{(\cdot)} \sum_{(n_{is}+j_s-j_{ik})}^{(\cdot)} \sum_{(n_{ik}=n+k_3-j_{ik}+1)}^{(\cdot)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(\cdot)} \sum_{(j_i-k_3)}^{(\cdot)} \sum_{(n_s=n+k_3-j_i+1)}^{(\cdot)} \sum_{(n_s=n-j_i+1)}^{(\cdot)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^i)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa}^i - 1)! \cdot (n_{sa} + j_{sa}^i - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^i \leq j_i + j_{sa} - s \wedge j_{sa}^i + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa}^{j_i} = \sum_{k=l}^{\dots} \sum_{(j_s=j_{ik})} \dots$$

$$\sum_{j_{ik}=n+l}^{\dots} \sum_{(l_s+j_{sa}-l)} \dots \sum_{(j_{sa}^{j_i}-n+j_{sa})} \dots \sum_{(i=n+l-l_{sa})} \dots$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+l)} \dots \sum_{n_{is}=n+l_1}^{\dots} \sum_{(n_{is}+j_s-j_{ik}-k_1)} \dots \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \dots$$

$$\sum_{(n_{ik}+j)}^{\dots} \sum_{(j_{sa}-k_2)} \dots \sum_{(n_{sa}+j_{sa}-j_i-k_3)} \dots \sum_{(n_{sa}=n+k_3-j_{sa}+1)} \dots \sum_{n_s=n-j_i+1} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

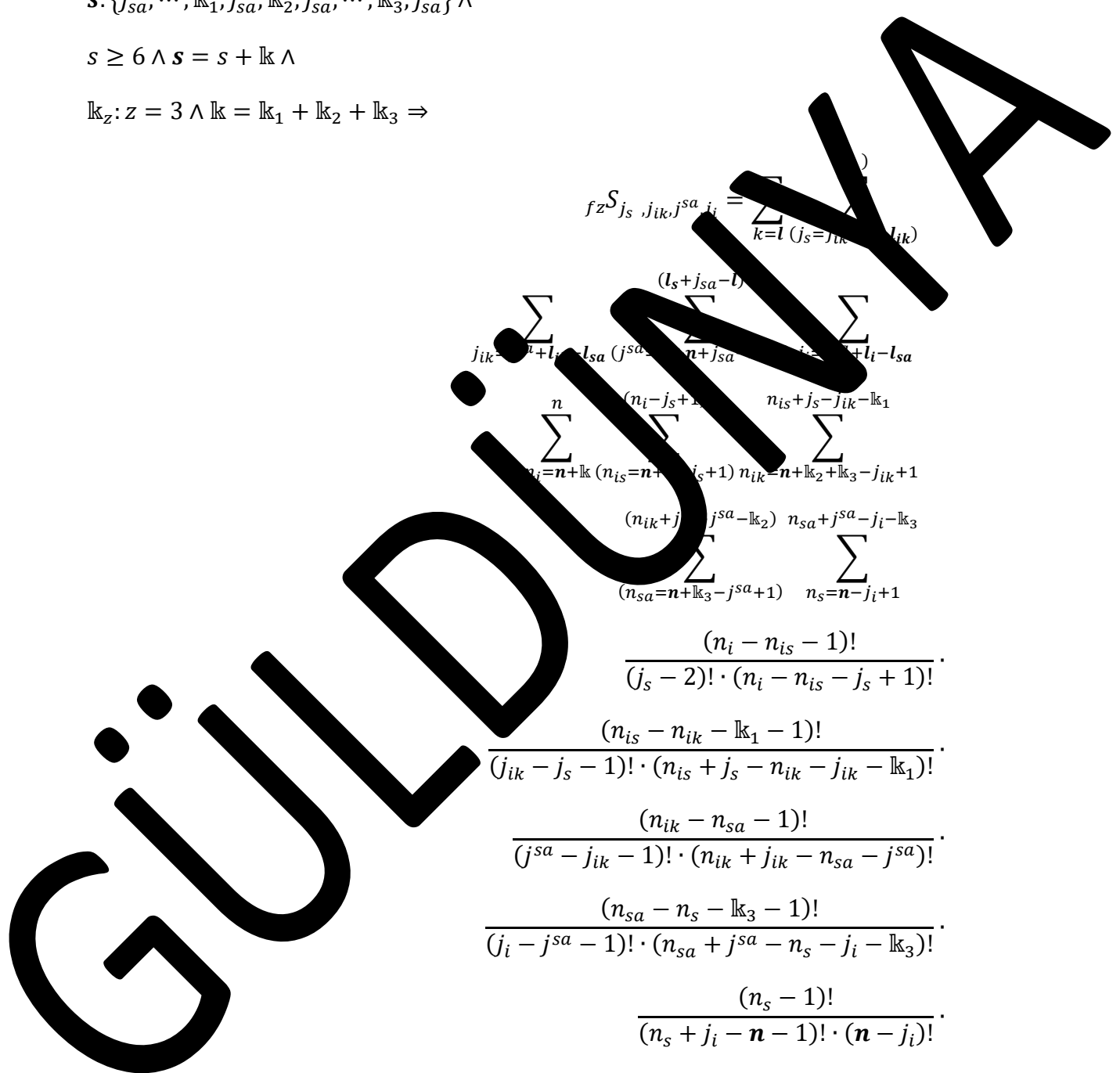
$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{()} \\ &= \sum_{j_{ik}=j^{sa}-l_{sa}}^{(j_{sa}=l_i+l_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_{sa}-l+1)} \\ &= \sum_{n_i=j^{sa}+l_{sa}-j_s+1}^{n_i=j^{sa}+l_i-l_{sa}} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &= \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{n_i} \sum_{n_s=n-j_i+1}^{n_{is}-n_{ik}-\mathbb{k}_1-1} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

GÜLDÜNKYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{i=1}^n \sum_{j_i=1}^{(j_s - j_i)} \sum_{k=1}^{(j_s - j_i)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j_{sa} = l_i + n + j_{sa} - D - s)}^{(l_{ik} - l_{sa})} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

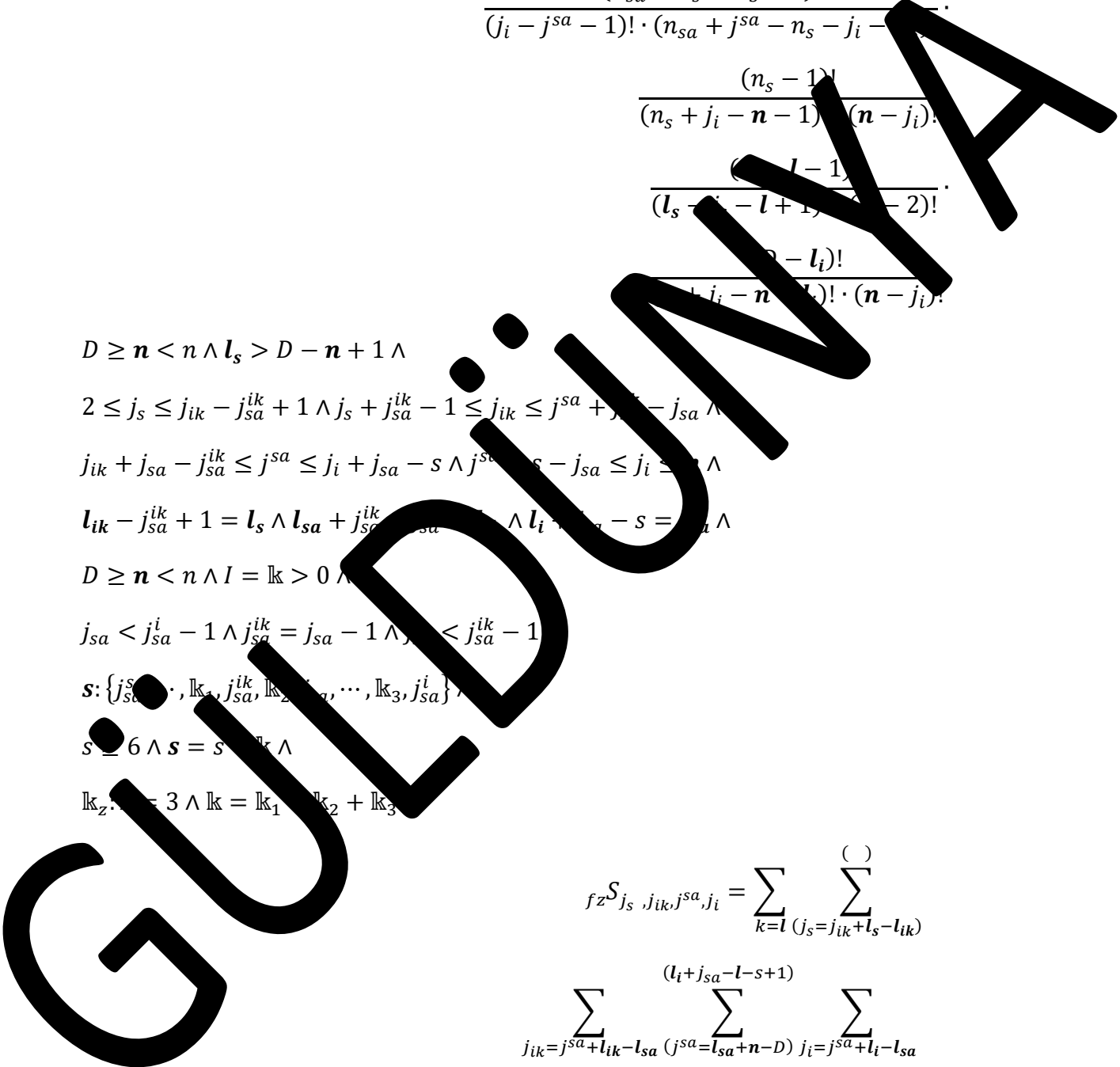
$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$



$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_{\mathbb{k}}}^n \sum_{(n_{is}=n+l_{\mathbb{k}}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{\mathbb{k}_2}+l_{\mathbb{k}_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{\mathbb{k}_1}}$$

$$\sum_{(n_{sa}=n+l_{\mathbb{k}_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{\mathbb{k}_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l_{\mathbb{k}_2}}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_i-n_{ik}-l_{\mathbb{k}_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-l_{\mathbb{k}_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{\mathbb{k}_3}-1)!}{(j_i-n_{sa}-1)!(n_i+j^{sa}-n_s-j_i-l_{\mathbb{k}_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$D \geq l < n \wedge l_s > D > n + 1 \wedge$

$l \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$s \geq n - l \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, l_{\mathbb{k}_1}, j_{sa}^{ik}, l_{\mathbb{k}_2}, j_{sa}, \dots, l_{\mathbb{k}_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-l)} \sum_{j_i=j_{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = l + l_s - l_{ik})}^{()} \sum_{(l_i + j_{sa} - l - s + 1)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{sa} = l_{ik} + n + j_{sa} - j_{sa}^{ik})} \sum_{j_i = j_{sa} + l_{ik} - l_{sa}}^{(j_i = j_{sa} + l_{ik} - l_{sa})} \sum_{n_i = 0}^n \sum_{(n_{is} = n + j_{sa} - j_{sa}^{ik} - j_{ik} + 1)}^{(n_{is} = n + j_{sa} - j_{sa}^{ik} - j_{ik} + 1)} \sum_{(n_{ik} = n - j_{ik} + 1)}^{(n_{ik} = n - j_{ik} + 1)} \sum_{(n_{sa} = l_{sa} - j_{sa} + 1)}^{(n_{sa} = l_{sa} - j_{sa} + 1)} \sum_{n_s = n - j_i + 1}^{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{j_{sa}=j_{ik}+n+j_{sa}^{ik}-j_{sa}} \sum_{n_i=0}^n \sum_{n_{is}=n+k_1}^{(n_i-k_1+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i-k_1+1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_i-k_1+1)} \sum_{n_s=n-j_i+1}^{(n_i-k_1+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜMNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{sa}}^{(l_s+l_{sa}-l)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - l_i)!}{(D + l_i - n - l_i - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i \wedge j_{sa}^i < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = > 0 \wedge$$

$$j_s < j_{sa}^{sa} - j_{sa}^{ik} = j_{sa}^{sa} - 1 \wedge j_{sa}^s < j_{sa}^{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$$

$$s \geq 6, j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \sum_{\substack{n_i=n+\mathbb{k} \\ (n_{is}=n+\mathbb{k}-j_s+1) \\ (n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i) \\ (n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j_{sa}+1) \\ (n_s=j_i+1) \\ (n_i-1) \\ (j_s-2) \\ (n_i-n_{is}-1) \\ (n_i-n_{ik}-\mathbb{k}_1-1) \\ (j_{ik}-j_s-1) \\ (n_{ik}-n_{sa}-1) \\ (j_{sa}-j_{ik}-1) \\ (n_{sa}-j_s-\mathbb{k}_3-1) \\ (j_i-j_{sa}-1) \\ (n_s-1) \\ (n_s+j_i-n-1) \\ (l_s-l-1) \\ (D-l_i) \\ (D+j_i-n-l_i) \cdot (n-j_i)!}} \\
 & \frac{(n_i-n_{is}-1)!}{(j_s-2) \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1) \cdot (n_i-n_{ik}-\mathbb{k}_1-1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \\
 & \cdot \frac{(n_{sa}-j_s-\mathbb{k}_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-\mathbb{k}_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$s \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}+1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_s}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{(n_{sa}+j^{sa}-\mathbb{k}_3)}^{n_{sa}+j^{sa}-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik} j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = l_s + l_s - l_{ik})}^{()} \\ \sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} (j_{sa} = j_{ik} - l_{ik}) j_i = j_{sa} + l_{ik} \\ \sum_{n_i = n}^n (n_{is} = n + l_{ik} + 1) n_{ik} = n - j_{ik} + 1 \\ (n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2) n_{sa} + j_{sa} - j_i - \mathbb{k}_3 \\ (n_{sa} = n - \mathbb{k}_3 - j_{sa} + 1) n_s = n - j_i + 1 \\ \frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{(j_{sa} = j_{ik} - l_{ik})} \sum_{(j_i = j_{sa} + l_i - l_{sa})} \sum_{(n_i = n + \mathbb{k}_1 - 1)} \sum_{(n_{is} = n + \mathbb{k}_2 + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1)} \sum_{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+l_{ik}}^{l_{ik}} \sum_{(j_{sa}^{ik}=D-s)}^{(\cdot)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}-1)!}$$

$$\frac{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{is}-n_{ik}-k_1-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

GÜLDÜNYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - \dots)}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{s + j_{sa}^{ik} - l} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(s - l_i)!}{(D + l_i - n - l_i - j_i - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i \wedge j_{sa}^i < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n_s - l - 1)!}{(n_s - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - j_{sa} - s \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_i = j_s > 0 \wedge$

$j_s < j_{sa}^{ik} - j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots\} \wedge$

$s \geq 6, j_s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s + j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-j_s-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)!(n_i+j^{sa}-n_s-j_i-\mathbb{k}_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}
 \end{aligned}$$

$D \geq \dots < n \wedge l_s > D \dots n+1 \wedge$

$z \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_s}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}_2+\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n_{ik}+\mathbb{k}_3}^{n_{ik}+j_{sa}-\mathbb{k}_2} \sum_{n_{sa}+j^{sa}-\mathbb{k}_3}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{n_{sa}-j_{ik}-1}^{n_{sa}-j_{ik}-1} \sum_{n_{sa}-j_i+1}^{n_{sa}-j_i+1}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - n_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1} (j_{sa} = j_{ik} - l_{ik}) j_i = j_{sa} + l_{sa} - l_{ik}$$

$$\sum_{n_i = 0}^n (n_{is} = n_{ik} + 1) n_{ik} = j_{ik} + 1$$

$$\sum_{(n_{sa} = l_{sa} - \mathbb{k}_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} n_{sa} + j_{sa} - j_i - \mathbb{k}_3$$

$$\sum_{n_s = n - j_i + 1}^{(n_{sa} = l_{sa} - \mathbb{k}_3 - j_{sa} + 1)} (n_i - n_{is} - 1)!$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \sum_{j_{ik}=l_{ik}+1}^{n} \sum_{j_{sa}=l_{sa}+1}^{n} \sum_{n_i=n+k_1+1}^{n} \sum_{n_{is}=n+k_2+1}^{n} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n} \sum_{n_s=n-j_i+1}^{n} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZİNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

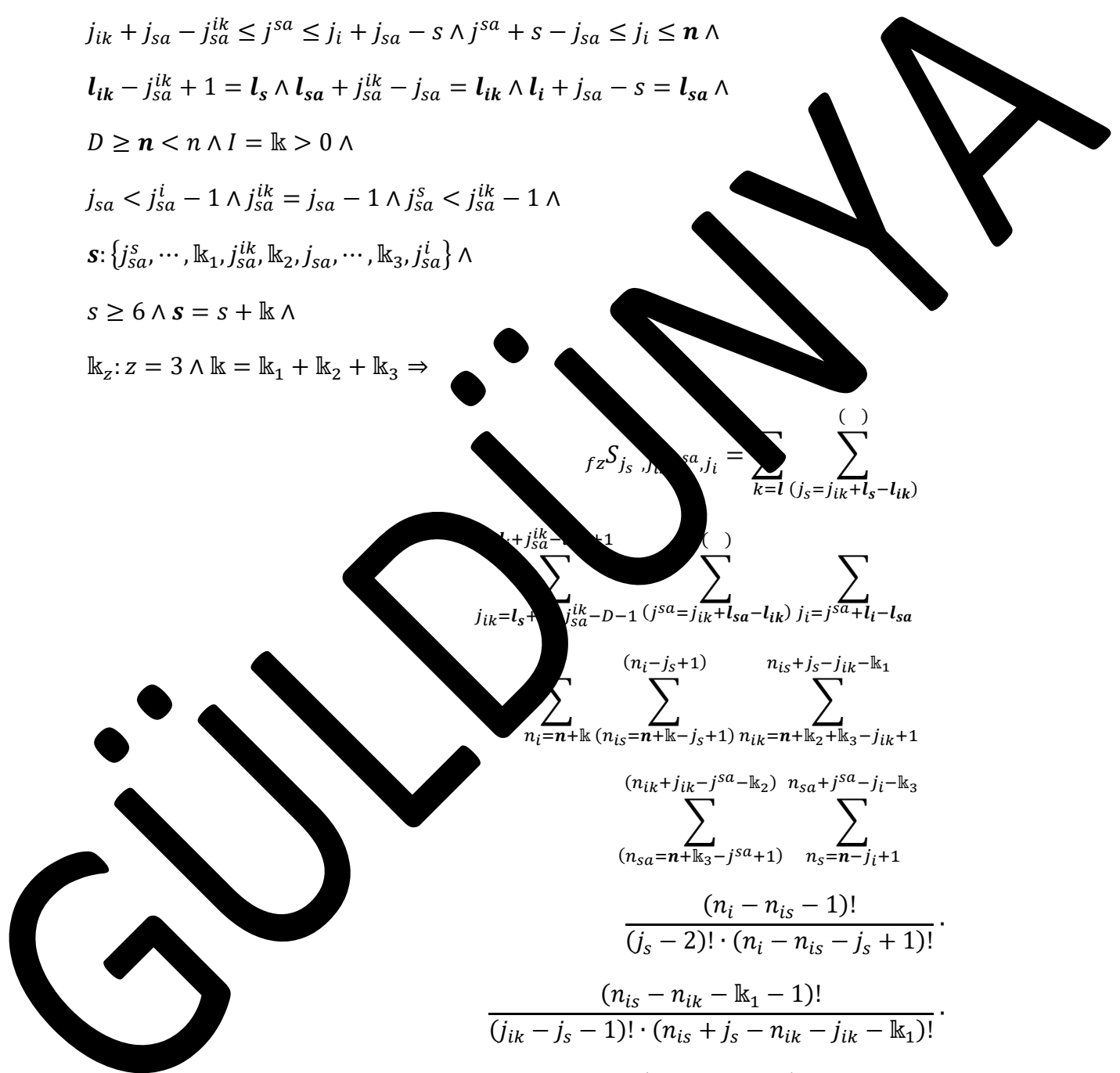
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}^{ik}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\ &\sum_{j_{ik}=l_s+l_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)} \\ &\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{j_{sa}^{ik} - l - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i - l_i)!}{(D + l_i - n - l_i - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i \wedge j_{sa}^i < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge \mathbb{k}_3 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n_s - l - 1)!}{(n_s - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa}^{sa} - s \wedge j^{sa} - j_{sa}^{sa} - j_{sa}^{ik} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_i = n - j_i > 0 \wedge$

$j_s < j_{sa}^{sa} - j_{sa}^{ik} = j_{sa}^{sa} - 1 \wedge j_{sa}^s < j_{sa}^{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{sa}, \dots, j_{sa}^{sa}, \dots, j_{sa}^{sa}, \dots, j_{sa}^{sa}\} \wedge$

$s \geq 6, j_{sa}^{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i - l - s + 2)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \\
 \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa}+j_i-k_3)}^{(n_{ik}+j_{ik}-j^{sa}+j_i-k_3)}$$

$$\sum_{(n_{sa}=n+k_3-j_i+1)}^{(n_{sa}=n+k_3-j_i+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+k_1)}^{()} \sum_{j_i=j_s+l_i-l_{sa}}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}-k_1-j^{sa})}^{(n_{ik}-k_1-j^{sa})} \sum_{(n_{ik}-k_1-j^{sa})}^{(n_{ik}-k_1-j^{sa})} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

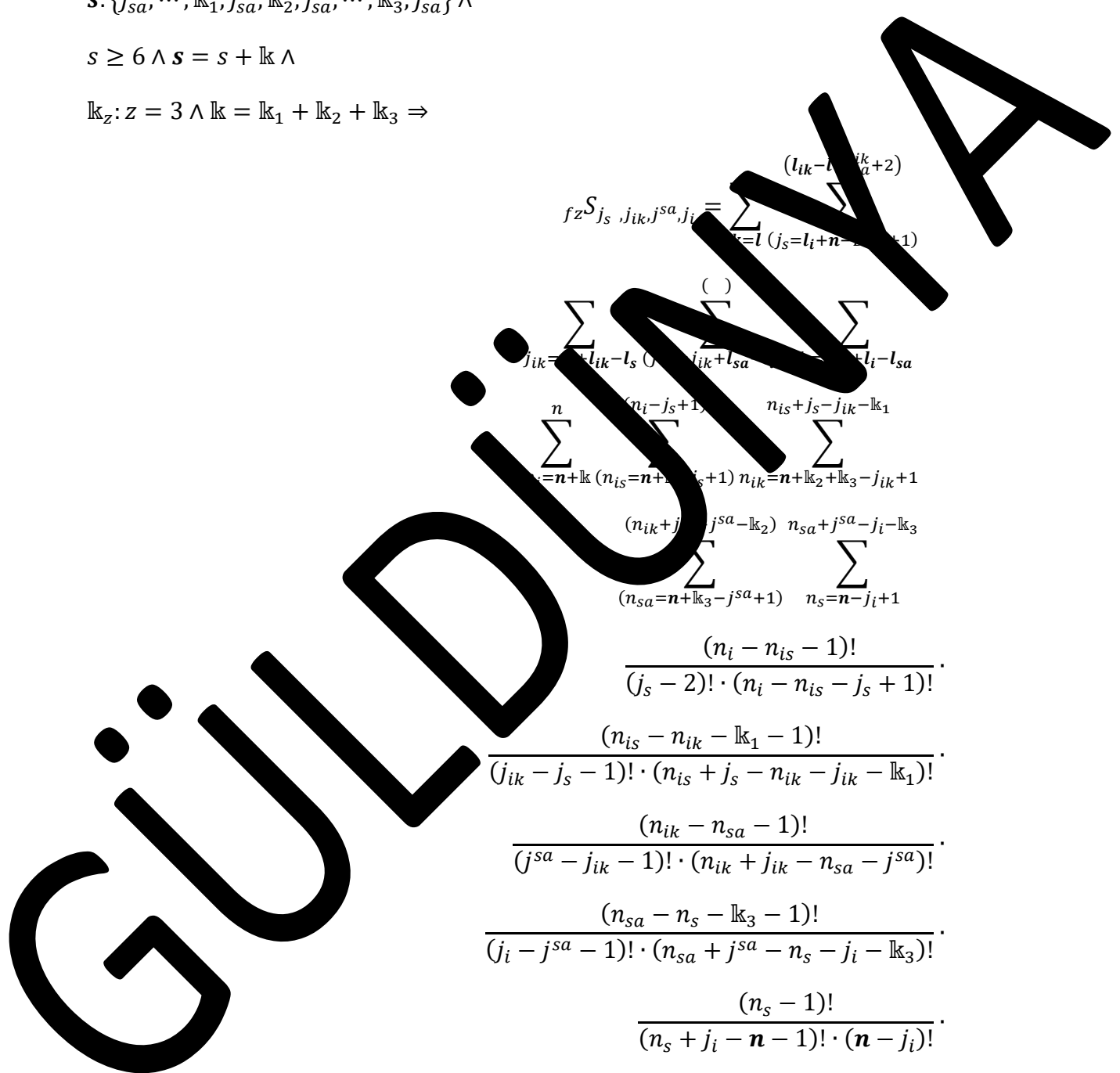
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_{sa}^{ik}} = \sum_{l=1}^{(l_{ik}-l_{sa}^{ik}+2)} \sum_{j_{ik}=l_{ik}-l_s}^{(n_{ik}-j_s+1)} \sum_{j_{sa}=l_{sa}}^{(n_{sa}+j_{sa}^{ik}-l_{sa})} \sum_{j_i=l_i-l_{sa}}^{(n_i-j_s+1)} \sum_{n_s=n+k}^{(n_{is}=n+k_1+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{j_{ik}-j_{sa}^{ik}+1} \binom{j_{ik}-j_{sa}^{ik}+1-k}{k} \binom{j_{sa}^{ik}-j_{sa}+k}{k} \binom{j^{sa}-j_{sa}+k}{k} \\ & \sum_{j_{ik}+l_{ik}-l_s}^{n} \sum_{j_{sa}+l_{sa}-l_{ik}}^{j_{sa}+l_{sa}-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n} \\ & \sum_{n_i=n+k}^{n} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_i - l - s + 2)} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)} \sum_{k=j_s + l_{ik} - l_s}^{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(n_i - j_s + 1)} \sum_{n_{is} = n + k - j_s + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)} \sum_{j_{ik} = j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i-l-s+2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & D \geq n < n \wedge l_s > D < n+1 \\
 & j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
 & j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\
 & l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
 & D > n < n \wedge l = k > 0 \wedge \\
 & j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge \\
 & s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge \\
 & s \geq 6 \wedge s = s + k \wedge \\
 & k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow
 \end{aligned}$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^i+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-1}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{sa}^i+1)}^{n_{ik}+j_{ik}-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > l - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^i + 1 \wedge j_s + j_{sa}^i - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^i - j_{sa} \wedge$$

$$j_s + j_{sa}^i \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^i + 1 = l_s \wedge l_{sa} + j_{sa}^i - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j_s-l+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_s-l+1)} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(j_s-l+1)} \sum_{i=j_{sa}^{ik}-l_{sa}}^{(j_s-l+1)} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=j_s-j_{ik}}^{n_{is}+j_s-j_{ik}} \sum_{n_{ik}=k_2+k_3-j_{ik}+1}^{(n_{ik}-j_s+1)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(k_i-s+2)} \sum_{(j_s=D)}^{(j_s=D)}$$

$$\sum_{j_{ik}=n+l_{ik}-l_s}^{(n_i-j_s+1)} \sum_{j_{sa}^{ik}=j_{ik}+l_{sa}}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{j_{sa}^i=j_{sa}^{ik}+l_{sa}}^{(n_{sa}+j_{sa}^{ik}-k_2)} \sum_{j_i=n+l_i}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_{is}+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{(n_{sa}=n+k_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}^{ik}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}^{ik}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

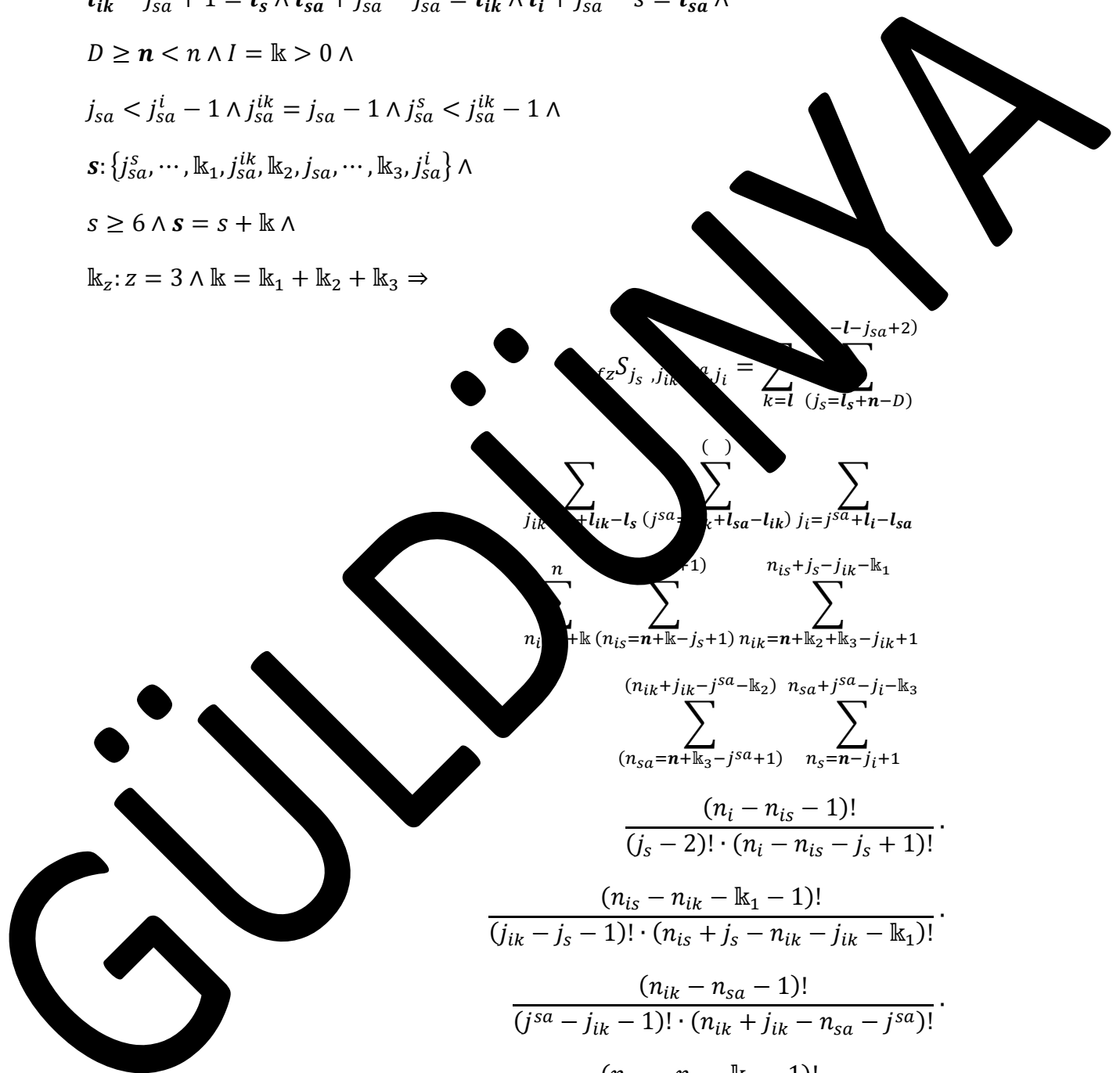
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{l-j_{sa}+2} \binom{(-l-j_{sa}+2)}{k} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{j_{ik}+l_{ik}-l_s} \sum_{j_s=j^{sa}+l_i-l_{sa}}^{n_i+j_s-j_{ik}-k_1} \\ & \sum_{n_i=n+k}^{n_i+k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1} \\ & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}^{j^{sa}, j_i} S_i$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 = j_{sa} - 2$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_{sa}+s-l-j_{sa}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=l_i+n-D} \sum_{j_s=j^{sa}+l_s-l_{sa}+1} \sum_{j_i=l_i+n-D} \sum_{j_s=j^{sa}+l_s-l_{sa}+1} \sum_{j_i=l_i+n-D}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜMNA

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$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_{sa} + s - j_{sa} + 2}^{l_i - l + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{is} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} = n + k - j_s + 1} \\
 & \frac{(n_i - j_s - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - k - k_1 - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 D \geq n < n \wedge l_s > D - n + 1 \wedge \\
 D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge
 \end{aligned}$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz = \sum_{j_{sa} = j_{sa}^{ik} - l + 1}^{(j_{sa}^{ik} - l + 1)} \sum_{j_i = l_i + n - D}^{(j_i = l_i + n - D)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)} \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{(n_{sa} = n + k_3 - j^{sa} + 1)} \sum_{n_s = n - j_i + 1}^{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

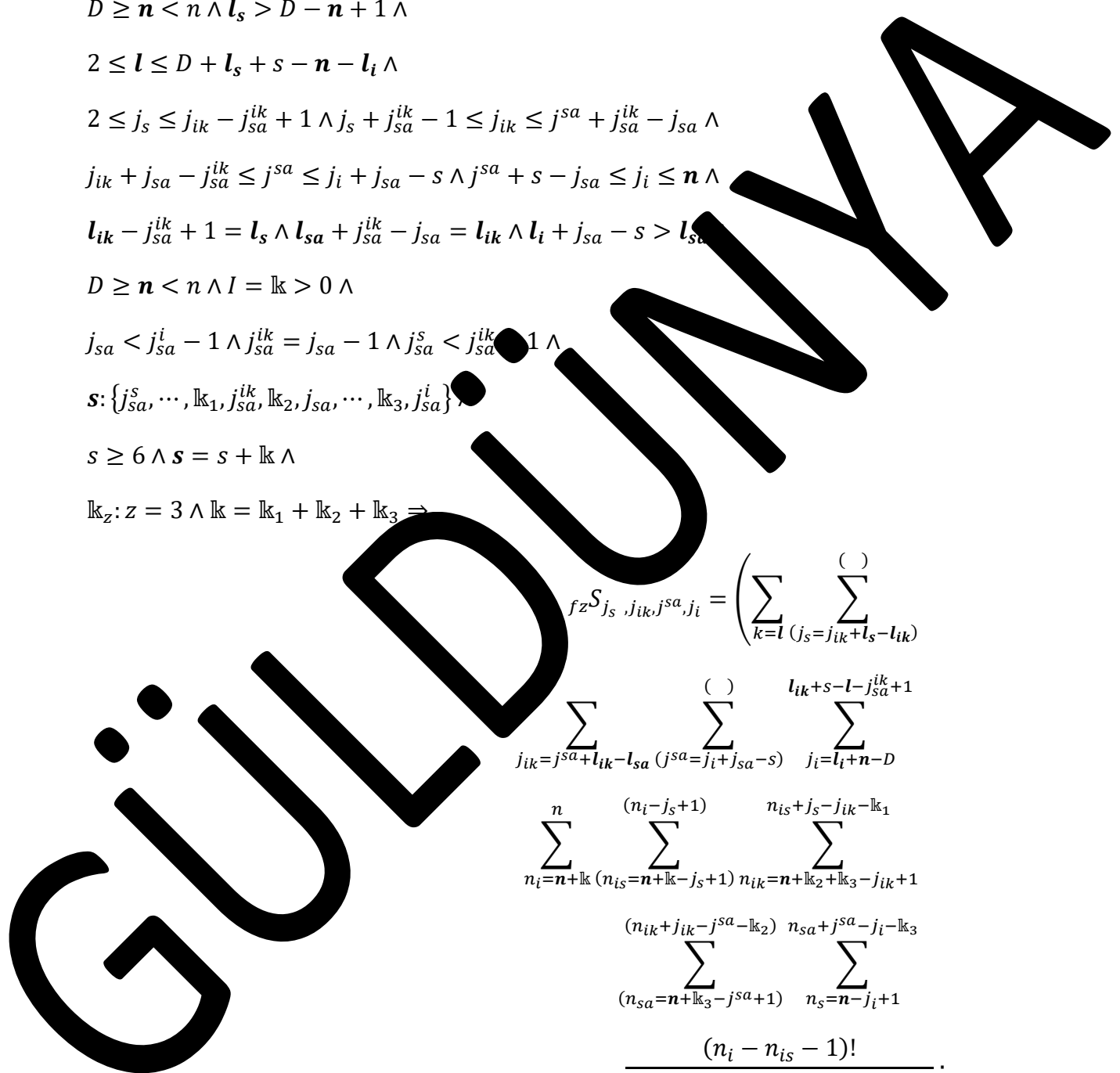
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned} f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \right) \\ &\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{l_{ik} + s - l - j_{sa}^{ik} + 1} \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$



$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \cdot \\
 & \sum_{k=l}^{j_s - l_i} \sum_{j_s = j_{ik} + l_s}^{j_s - l - j_{sa}^{ik} + 1} \sum_{j_i = n - D - j_{sa}^{ik}}^{j_i - l_i + l_s - l - j_{sa}^{ik} + 1} \sum_{n_{is} = n + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \sum_{n_s = n - j_i + 1}^{n_s - j_i + 1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

GÜLDÜMAYA

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2} \sum_{l_i-l+1} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j_s-j_i-l_{k_3})} \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)} \sum_{n_s=n+l_{k_3}-1} \\
 & \frac{(n_i - j_s - 1)!}{(n_i - j_s + 1)!} \cdot \frac{(n_{is} - j_s - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_s - n_{sa} - 1)!}{(n_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D - j_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f^z \sum_{j_s}^{j_{sa}^{ik}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_{sa}^{ik}, j_i} \right) \cdot \sum_{j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{j_{sa}^{ik}, j_i} \cdot \sum_{j^{sa}=j_i+l_{sa}-l_i}^{j_{sa}^{ik}, j_i} \cdot \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \cdot \sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \cdot \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \cdot \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \cdot \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_i, l_s=l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{j_i=l_i+n-D}^{(j_{sa}=j_i+l_{sa})} \sum_{j_i=l_i+n-D}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i+1)} \sum_{j_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i+1)} \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_i-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}=n+l_{k_3}-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(l_{ik}-l+1)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{(l_i-l+1)} \\
& \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}-1)} \\
& \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j^{sa}-j_i-1)} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{(n_s=j_i+1)} \\
& \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$D - l_s + n - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\quad)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=n-l)}^{(\quad)} \sum_{j_i=n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+l)} \sum_{(n_{is}+j_s-n)}^{(n_{is}+j_s-j_{ik})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f^z S_{j_s} = \sum_{j_s=l_s+l_{ik}}^{(j_s)} \sum_{j_{ik}=j_i+j_{sa}-s}^{(j_{ik})} \sum_{j_{sa}=j_{sa}^{ik}-j_{sa}}^{(j_{sa})} \sum_{j_i=l_i+n-D}^{(j_i)} \sum_{n+l}^{(n+l)} \sum_{n_{is}=n+k-j_s+1}^{(n_{is})} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{ik})} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_{sa})} \sum_{n_s=n-j_i+1}^{(n_s)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}+1}^{n_{is}+j_s-l-k_1} \\
 & \frac{\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j^{sa}-j_i-l_{k_1})} \sum_{(n_{sa}-l_{k_3}-j^{sa})}^{j_i+1}}{(n_{is}-1)!}{(j_i-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{ik}^{lk} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{lk}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
fz_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
&\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1} \\
&\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \\
&\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} + 1)} \sum_{n_s = n - j_i}^{n_{sa} + j^{sa} - j_i - k_3} \\
&\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
&\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
&\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
&\frac{(n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
&\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
&\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
&\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
&\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
&\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \frac{\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=l_i+n-D} \sum_{j_{sa}=j_{ik}-l_{sa}} \sum_{j_{sa}^{ik}=j_{sa}-1} \sum_{j_{sa}^s=j_{sa}^{ik}-1} \sum_{j_{sa}^i=j_{sa}^{ik}-1} \sum_{n_i=n+k_1-j_{sa}+1} \sum_{n_{is}=n+k_2-j_{sa}+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j^{sa}+1} \sum_{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZİMYA

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_s+s} \sum_{=l_i+n-D} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j^{sa}-j_i-1)} \sum_{(n_{sa}+k_3-j)}^{(n_{sa}+j^{sa}-j_i-1)} \\
 & \frac{\dots - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1}$$

GÜLDENYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 0 - n + 1 \wedge$$

$$D + l_s - s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)}^{(l_i - l + 1)} \sum_{j_i = l_i + n - \dots}^{(\cdot)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_{ik} - \mathbb{k}_1)}^{(n_{is} + j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{ik} + j_{ik} - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \sum_{(n_{sa} + j_{sa} - \mathbb{k}_3)}^{(n_{sa} + j_{sa} - \mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - \dots - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}} \binom{l_s + s - l}{j_s - j_{ik}} \right)$$

$$\sum_{j_i = n + k}^n \binom{n_i - j_s + 1}{n_i - n + k} \binom{n_i + j_s - j_{ik} - k_1}{n_i - n + k} \binom{n_i + j_s - j_{ik} - k_1}{n_i - n + k}$$

$$\sum_{n_{is} = n + k}^n \binom{n_{is} - n + k}{n_{is} - n + k} \binom{n_{is} - n + k}{n_{is} - n + k} \binom{n_{is} - n + k}{n_{is} - n + k}$$

$$\sum_{n_{sa} = n + k_3 - j_{sa} + 1}^{n_{ik} + j_{sa} - j_{sa} - k_2} \binom{n_{sa} + j_{sa} - j_i - k_3}{n_{sa} + j_{sa} - j_i - k_3} \binom{n_{sa} + j_{sa} - j_i - k_3}{n_{sa} + j_{sa} - j_i - k_3}$$

$$\sum_{n_s = n - j_i + 1}^{n_s = n - j_i + 1} \binom{n_s - 1}{n_s - 1} \binom{n_s - 1}{n_s - 1} \binom{n_s - 1}{n_s - 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right) \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-j_i-k_3)!}{(n_{sa}=n+k_3-j_{sa}^{ik}-1)! \cdot (n_s=n-j_i+k_3)!} \cdot \frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-l_{sa}-1)! \cdot (n_{sa}+j_{sa}^{ik}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}^{ik}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDENYA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{ik}^{lk} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{lk}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=l_i+n}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i+l_{k_3}}^{n_{sa}+j_{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$n > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{(j_s)} \sum_{j_i=j_{ik}+1}^{(j_{sa}^{ik}+1)} \sum_{j_{ik}=j^{sa}-1}^{(j_{sa}=j_i+l-1)} \sum_{j_i=l_i+n-D}^{(l)} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{n_i=n+\mathbb{k}-j_s+1}^{(n_i+1)} \sum_{n_i=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i+1)} \sum_{n_{sa}=j^{sa}-\mathbb{k}_2}^{(n_{ik}+j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=j^{sa}-\mathbb{k}_3}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}^{(n_{sa}=j^{sa}-\mathbb{k}_3-j^{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k_2}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(j_{ik}-j_{sa}^{ik})}^{(j_{ik}-j_{sa}^{ik})}$$

$$\frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_{sa}^{ik})! \cdot (n_s-n-j_i+l_{k_3})!} \cdot \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i+l_{k_1}+1)!}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j_{sa}^{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-l_{k_3}-1)! \cdot (n_{sa}+j_{sa}^{ik}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

GÜLDENWA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{sa} - j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
fz S_{j_s, j_{ik} j^{sa}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
&\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
&\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \\
&\sum_{(n_{ik}+j_{ik}-j^{sa})}^{()} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{()} \\
&\sum_{(n_{sa}=n+k_3)}^{()} \sum_{n_s=n-j_i}^{()} \\
&\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
&\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
&\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
&\frac{(n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
&\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
&\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
&\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
&\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{sa}-l_{ik}}^{()} \sum_{j_{ik}=j_{sa}+l}^{()} \sum_{j_i=l_i+n-D}^{()} \sum_{n_i=n+k}^{(n_i+1)} \sum_{n_{ik}=n+k-j_s+l}^{(n_{ik}+1)} \sum_{n_{sa}=n+k_2+k_3-j_{ik}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZİN YA

$$\begin{aligned}
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j_{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j_{sa}^{lk}+j_{sa}^{lk}-j_i-k_3)}^{(n_{ik}+j_{ik}-j_{sa}^{lk}+j_{sa}^{lk}-j_i-k_3)} \\
 & \frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{lk}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{lk})!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j_{sa}^{lk}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}^{lk}-l_{ik})! \cdot (j_{sa}^{lk}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}^{lk}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}^{lk}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{l_s+j_{sa}^{lk}-l} \sum_{(j_{sa}^{lk}=l_{sa}-n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDENYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1)}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - k_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - k_1)!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_s} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s = j_{i_k} + l_s - l_{i_k})}^{()} \sum_{j_{i_k} = l_s + n + j_{s_a}^{i_k} - D - 1}^{j^{s_a} + j_{s_a}^{i_k} - j_{s_a} - 1} \sum_{(j^{s_a} = j_i + j_{s_a} - s)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - l}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1)}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + n - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq n < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = 1 + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-k_3-k_1-1)!}{(j_i-j_{sa}-1)! \cdot (n_i+j_{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

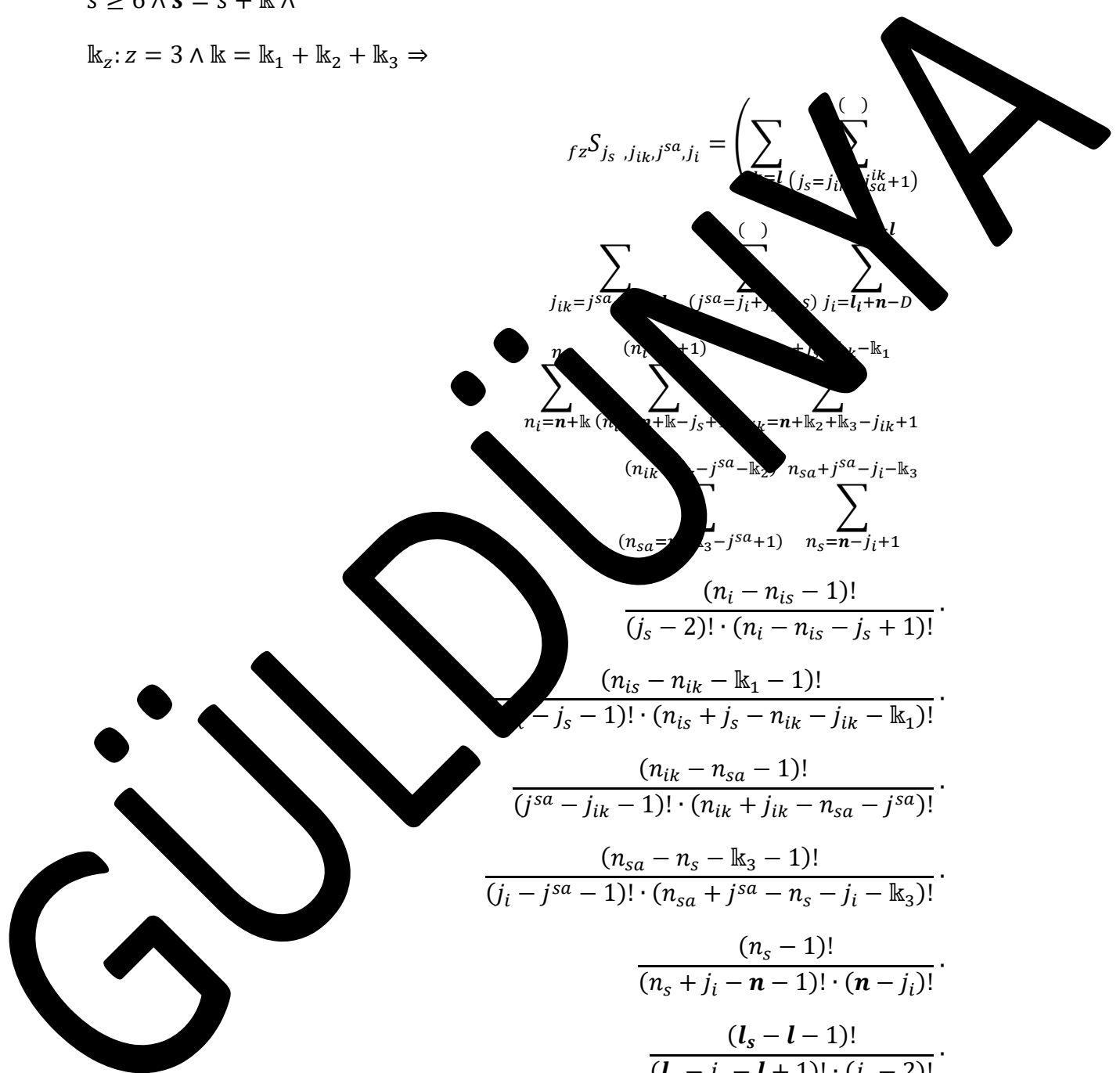
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+1}^{()} \sum_{j_{sa}=j_i+1}^{()} \sum_{j_{ik}=j^{sa}+1}^{()} \sum_{(j^{sa}=j_i+1, \dots, s) j_i=l_i+n-D} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{(n_{ik}+1)}^{(n_{ik}+1)} \sum_{(n_{sa}=n+\mathbb{k}-j_s+1)}^{(n_{sa}+1)} \sum_{(n_s=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_s+1)} \sum_{(n_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{ik}+1)} \sum_{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(n_{sa}+1)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{()} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n}^{l_s+s-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{j_{ik}=n+l_k}^{n_{ik}-j_{ik}+1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(j_i-l_{k_3})}^{(j_i-l_{k_3})} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa})}^{(n_{sa}=n+l_{k_3}-j^{sa})} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \\
 & \frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik})! (n_{sa}-1)!}{(j^{sa}-l_{k_2}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-l_{k_3}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - k_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - k_1)!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_i - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l} \sum_{(j_s = l_s + n - D)}^{(j_{i_k} - j_{s_a}^{i_k})} \sum_{j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a}} \sum_{(j^{s_a} = j_i + j_{s_a} - s)} \sum_{j_i = l_i + n - D}^{l_s + s - l}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

GÜLDEN

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - l_{sa} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + n - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq n < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - j_{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = 1 + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{l_i-l+1} \sum_{j_i=l_i+n-D} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (j_s+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_s + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{l=1}^{(j_s=j_{ik}+j_{sa}^{ik}+1)} \sum_{j_i=l}^{(j_i=l+n-D)} \sum_{j_{ik}=j^{sa}}^{(j_{sa}=j_i+l)} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k}-j_s+l)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}=n+\mathbb{k}-j_s+l)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_i+l)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZİN YA

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa})} \sum_{n_s=n-j_i+1}^{j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}) (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{l_{ik}-l+1} \sum_{j_{ik}=l_{ik}+n-D} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^l \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - l}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} + j_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} + j_{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i - 1 \leq l \leq D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > 0 \wedge$

$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$\{j_s, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(n_{sa}+j_{sa}-j_i-k_3)} \\
 &\sum_{(n_{sa}=n+k_3)}^{(n_{sa}=n+k_3)} \sum_{(n_s=n-j_i)}^{(n_s=n-j_i)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}+s-j_{sa}} \sum_{j_{sa}^s=l_i+n_{is}-D-s} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{n_i=j_{sa}+l_{ik}-l_{sa}} \sum_{n_{is}=n+k_1-j_{sa}+1}^{(n_i-n_{is}+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i-n_{is}+1)} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_i-n_{is}+1)} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \right)$$

GÜLDENMYA

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j_{sa}-j_{sa}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j^{sa}-j_i-1)} \sum_{(n_{sa}+k_3-j)}^{(n_{sa}+j^{sa}-j_i-1)} \\
 & \frac{(n_{is} - n - k_1 - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_i+n-D}$$

GÜLDÜZYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l_s \leq D + l_s + s - 1 - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_Z^{\mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-\mathbb{k}_3)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j^{sa} - n_{sa} - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\lfloor \frac{D-l_i}{j_s} \rfloor} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{(j_{ik} = j^{sa} + l_{ik} - l_{sa})}^{l_i - l + 1} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})}^{j_i = l_i + n - D} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - l_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_s - j^{sa} - s)!} \cdot \frac{1}{\binom{D}{D + j_i - n - l_i} \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \leq j_{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_3 = \mathbb{k} - \mathbb{k}_1 - \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \binom{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)}{\quad}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j^{sa} - n_{sa} - l_{k_3})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_{is} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{lk}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{lk}+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=i)}^{(\cdot)} \sum_{(j_{ik}=l_{ik}+1)}^{(\cdot)} \sum_{(j_{sa}=l_{ik}+1)}^{(\cdot)} \sum_{(j_i=j^{sa}+l_i-l_{sa})}^{(\cdot)}$$

$$\sum_{n_{ik}+l_{ik}+1}^n \sum_{n_{is}=n+l_{ik}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+l_{ik}+l_{sa}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+l_{sa}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa}$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{i-1} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_{sa} - l + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_s - n - l_i)! \cdot (n - j_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} < j^{sa} + j_s - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_s + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge \mathbb{k} = \mathbb{k} > 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$s; \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot$$

$$\frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - l_{k_3})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_{i_s} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \right)$$

$$\sum_{j_{i_k}=l_s+n+j_{s_a}^{i_k}-D-1}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}+1}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(C)} \sum_{(j_s = \dots + l_s - l_{ik})}^{(j^{sa} + j_{sa} - l_{ik} - j_{sa})} \sum_{j_{ik} = l_s}^{(D + j_{sa} - D - s - 1)} \sum_{j_{sa} = l_s - D - 1}^{(l_i - l + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_i + n - D}$$

$$\sum_{n_i = n + \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+l-1}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}-l-j_{sa}^{ik})}^{(l_{sa}-l+1)} \sum_{(j_i+l-s-j_{sa})}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+l_{is}+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\dots}^{n_{is}+j_s-k-l_{k1}} \sum_{i_{ik}+1} \\
 & \sum_{(n_{ik}+j_{ik}-j_s-l_{k2})} \sum_{(n_{sa}+j_{sa}-j_s-l_{k3})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - l_{k1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}} \sum_{j_{sa}=l_i+n_{is}-D-s} \sum_{n_i=j_{sa}+j_{ik}-k_1}^{(n_i=j_{sa}+1)} \sum_{n_{is}=n+k_1+1}^{(n_{is}=n+k_1+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j_{sa}+1} \sum_{n_s=n-j_i+1} \right) \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right. \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j_s-j_{sa}+1}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+1}^{n_{is}+j_s-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{sa}-j_i-1)}^{(n_{sa}+j_{sa}-j_i-1)} \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDÜZYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(j_i + j_i - n_s - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_i - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\left(\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l_s \leq D + l_s + s - 1 - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_Z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{(n_{is}+j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - \mathbb{k}_1 - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{j_s = j_{i_k} + l_s - l_{i_k}}^{l_s + j_{s_a}^{i_k} - l} \sum_{j_{i_k} = l_s + n + j_{s_a}^{i_k} - D - 1}^{(l_i + j_{s_a} - l - s + 1)} \sum_{(j^{s_a} = l_s + j_{s_a} - l + 1)} \sum_{j_i = j^{s_a} + l_i - l_{s_a}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = n + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDEN

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = 5 - \mathbb{k}_2 \wedge$$

$$\mathbb{k}_2 = 5 - \mathbb{k}_1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{z^S}^{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +
 \end{aligned}$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{lk})} \sum_{(j_s = l_s + n - D)} \right)$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - l - 1)! \cdot (l - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j^{sa} + 1)!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l_s}^{(l_s-l+1)} \sum_{j_{ik}=j^{sa}-l_{sa}}^{j^{sa}-l-s} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{j^{sa}+l-s} \sum_{j_s=j^{sa}+l-s}^{j^{sa}+l-s} \sum_{j_s=j^{sa}+l-s}^{j^{sa}+l-s}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^n \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{j_s+1} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZÜMÜ

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa} = l_{sa}$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - l - l + 1)! \cdot (l - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{ik} + 1)!} \cdot \frac{(D)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} < j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_s + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$s; \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{sa} - n_{sa} - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{\binom{D}{l}} \sum_{\substack{(\quad) \\ (j_s=j_{ik}+l_s-l_{ik})}} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{\substack{(l_s+j_{sa}-l) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=0}^{j^{sa} - j_{sa} - l_{sa} - l_i + j_{sa} - D - s - 1} \sum_{l_i = l_i + 1}^{l_i - l + 1} \sum_{j_i = j_i + n - D}^{j_i = l_i + n - D} \sum_{j^{sa} = j^{sa} + n - D}^{j^{sa} = l_{sa} + n - D}$$

$$\sum_{n_i = n + \mathbb{k}} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}+n-D)}^{l_s+j_{sa}^{ik}-l} \sum_{(j_{sa}+l_{sa})}^{(l_{sa}-l+1)} \sum_{(j_{sa}+s-j_{sa})}^{l_i-l+1}$$

$$\sum_{(n_i=n+k)}^n \sum_{(n_{is}=n+k_1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

GÜLDENWA

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-k-k_1}^{n_{is}+j_{sa}-k-k_1} \sum_{(n_{ik}+j_{ik}-j_{sa}-k-k_2)}^{n_{sa}+j_{sa}-k-k_3} \sum_{j^{sa}+1}^{j^{sa}+1} \sum_{=n-j_i+1}^{=n-j_i+1} \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Big)$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(l_s + j_{sa} - l)} \sum_{j_{ik} = j_{sa} + k}^{(l_s + j_{sa} - l)} \sum_{j_i = n + k}^{(n + j_{sa} - l)} \sum_{j_{sa} = n + j_{sa} - l}^{(n + j_{sa} - l)} \sum_{j_{sa} = n + k_3 - j_{sa} + 1}^{(n + j_{sa} - l)} \sum_{n_{is} = n + k_1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{n_{sa} = n + k_3 - j_{sa} + 1}^{(n_{ik} + j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j_{sa} - j_i - k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDENMYA

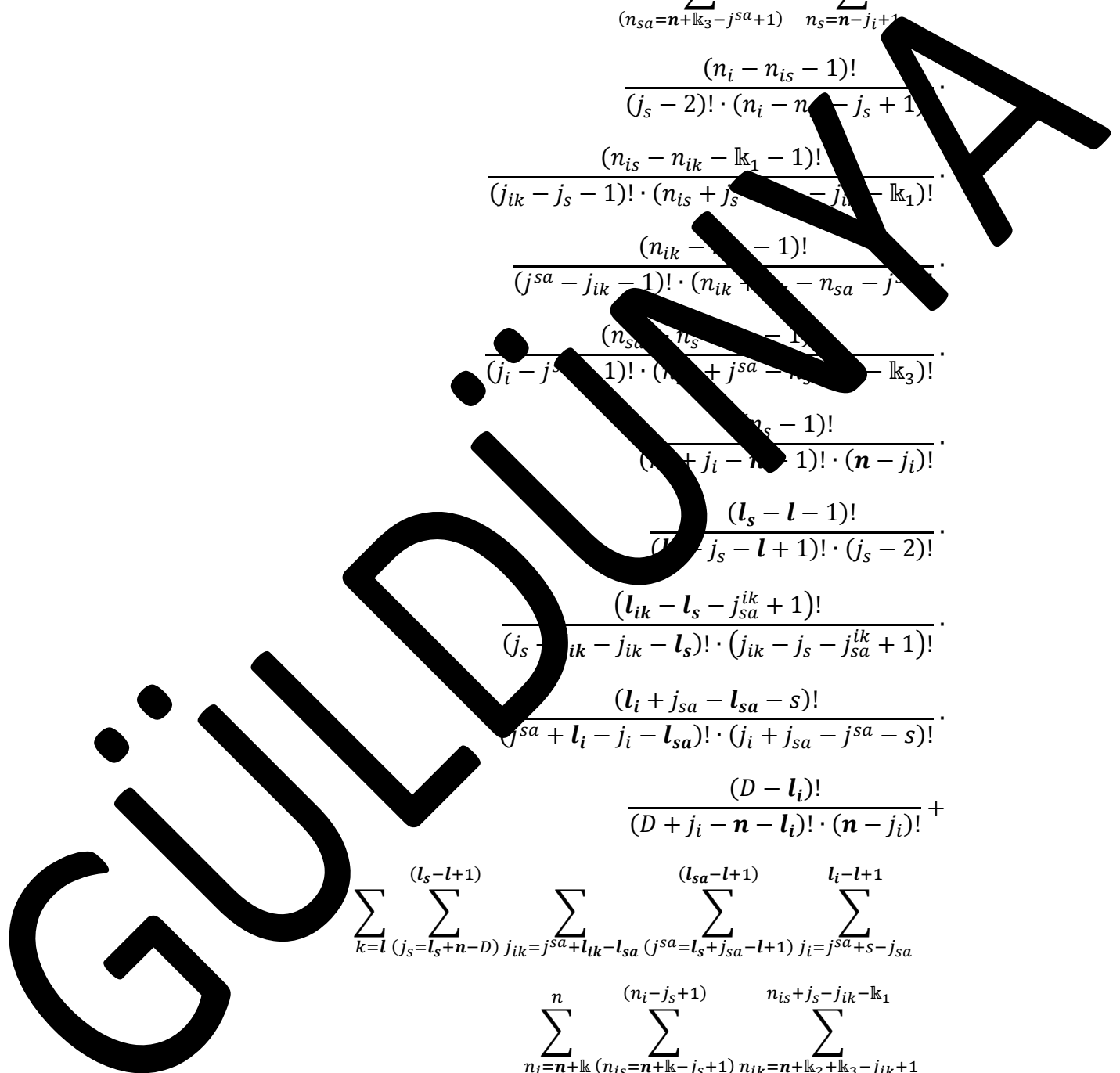
$$\begin{aligned}
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}=n+l_{k_3}-j_s)}^{(n_{sa}=n+l_{k_3}-j_s)} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j^{sa}-l_{k_1}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-l_{k_3}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

GÜLDÜZYAZ

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^s \sum_{\substack{(l_s-l+1) \\ (j_s=l_s+n-D)}} \sum_{\substack{j_{ik}=j^{sa}+l_{ik}-l_{sa} \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n - l - 1)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - j^{sa} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - j_{sa} - l_{sa} - s)!}{(j_s + l_i - j_i - l_s) \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZMAYI

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\}$

$s - 6 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_{is} - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{\mathbb{k}_{sa}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

GÜLDÜZYA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{j_s=l_s}^{l_s-l+1} \sum_{j_{ik}=D}^{l_{ik}-l+1} \sum_{j_{sa}=D}^{l_{sa}-l+1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n-D} \sum_{n_{is}=n+\mathbb{k}_3-j_s+1}^{n-l_{ik}+1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GUILDFORD

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-j_{sa})} \sum_{j_i=j_{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+l_{k_1}}^n \sum_{n_{is}=n+l_{k_2}-j_{ik}-l_{k_1}}^{j_s} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{sa})}^{(n_{sa}=n+l_{k_3}-j_{sa}^{sa})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZ

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} j_{sa}^{ik} &= \sum_{l=1}^{l+1} \sum_{j_s=l_s+n-D} \\ &= \sum_{j_{ik}=l_{ik}}^{l_{ik}-l+1} \sum_{j_{sa}^{ik}=l_{sa}+n-D}^{a-l+1} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\ &= \sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &= \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &= \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &= \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &= \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - 1 \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z \geq 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \binom{()}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + n - 1)!}{(n_s + n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(n_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(D - l)}{(D + j_i - l)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \right) \\
 & \sum_{i_{ik} = l_i + n + \dots - D - s}^{l_{sa} + j_s - l - j_{sa} + 1} \sum_{()}^{()} \sum_{j_i = j^{sa} + s - j_{sa} + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDÜMÜNVA

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{j_i=l_i+n}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{j_{ik}=l_i+n}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{j_{is}=n+l_{k_1}+1}^{n+l_{k_1}+1} \sum_{n_{ik}=n+l_{k_2}}^{n+l_{k_2}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n+l_{k_3}-j^{sa}+1} \sum_{n_s=n-j_i+1}^{n+l_{k_3}-j^{sa}+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_i^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + \dots \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{()}{n_{is}=n+k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{\binom{()}{n_{sa}=n+k_3-j^{sa}+1}}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} \right) + \\
 & \sum_{j_{ik}=l_{ik}+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_{sa}^{ik}+l_{sa}-l_{ik})}^{(j_{sa}^{ik}+l_{sa}-l_{ik})} \sum_{(j_i+j_s-j_{ik}-\mathbb{k}_1)}^{(j_i+j_s-j_{ik}-\mathbb{k}_1)} \\
 & \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\binom{()}{j_{ik}=l_{ik}+n-D}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{\binom{()}{j_i=l_i+n-l_{sa}}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{()}{n_{is}=n+k-j_s+1}}^{(n_i-j_s+1)} \sum_{\binom{()}{n_{ik}=n_{is}+k-j_{ik}+1}}^{n_{is}+j_{sa}^{ik}-k-k_1} \\
 & \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}^{(n_{ik}+j_{ik}-j^{sa}-k-k_2)} \sum_{\binom{()}{j_i=n-j_i+1}}^{n_{sa}+j_{sa}^{ik}-k-k_3} \\
 & \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

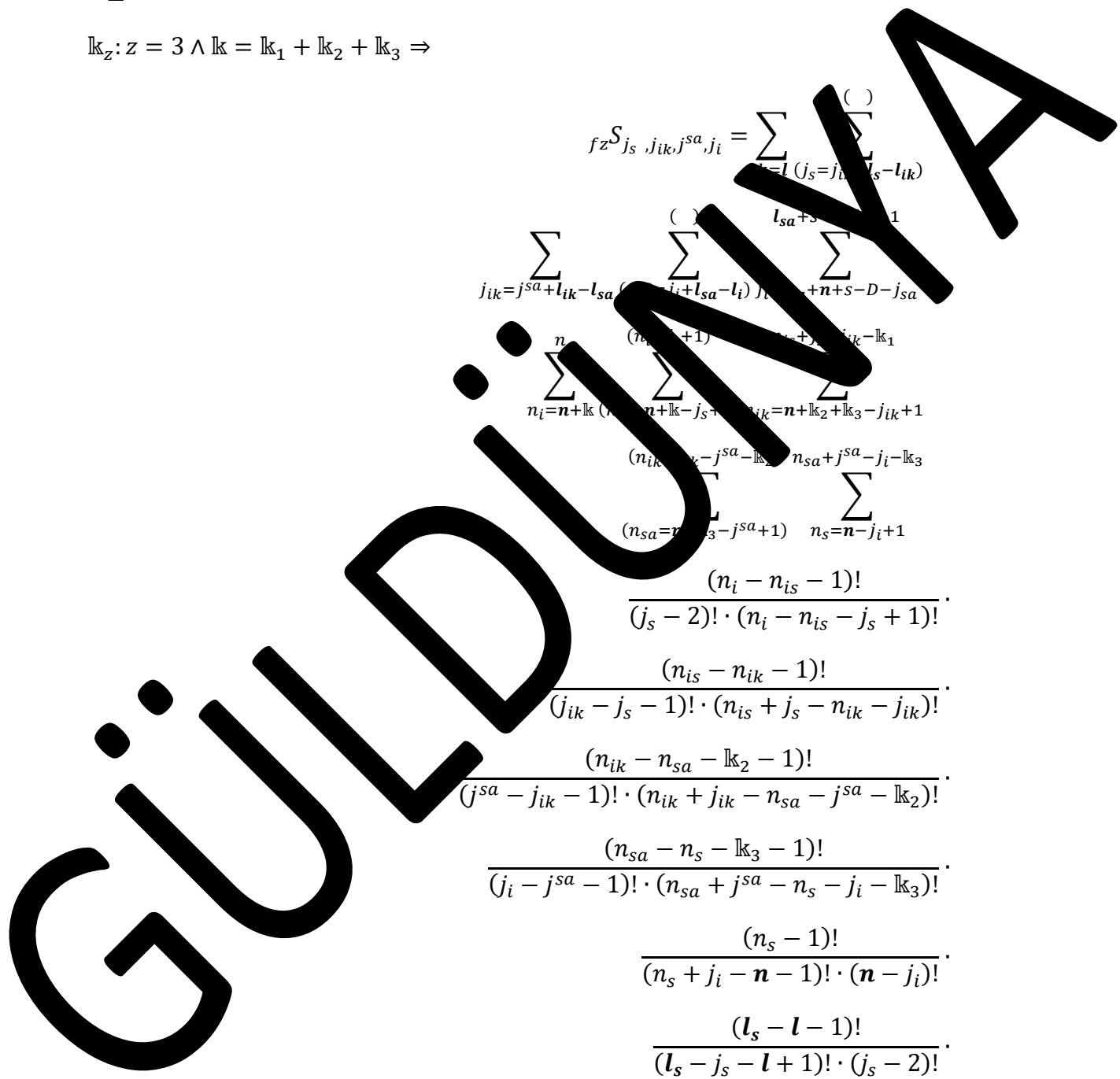
$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{l=1}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \dots$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j_i+l_{sa}-l_i)}^{()} \sum_{(n+s-D-j_{sa})}^{()} \dots$$

$$\sum_{n_i=n+\mathbb{k}}^{()} \sum_{(n+\mathbb{k}-j_s)}^{()} \sum_{(j_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{()} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_s^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_s^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{z^s} &= \sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{sa} + l_{ik} - l_{sa})} \sum_{j_i = l_{ik} + n + s - D - j_{sa}^{ik}}^{(j_{sa} + l_{ik} - l_{sa})} \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\ & \sum_{n_{sa} = n + k_3 - j_{sa} + 1}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=n+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_s+n+s-D-1}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = l_i + n - D}^{l_{sa} + s - l - j_{sa} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_1: z = 3 \wedge \mathbb{k}_2 = \mathbb{k}_1 + 1 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j^{sa} - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j^{sa} - n - l_i)!}{(D + j^{sa} - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = s > 0 \wedge$$

$$j_s < j_{sa}^{sa} - j_{sa}^{ik} < j_{sa}^{sa} - 1 \wedge j_{sa}^s = j_{sa}^{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{sa}, \dots, j_{sa}^{sa}\} \wedge$$

$$s \geq 6, l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_1}, k_2, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - j_s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \quad j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+l_k} \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}-1} \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-1)}{n_s=j_i+1}} \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$D \geq \langle n \wedge l_s \rangle D = n + 1$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$n \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-k_3)}{(n_{sa}=n+k_3-k_1+1) \cdot (n_s=n-j_i-k_3)}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+l_{sa}-l_{sa})}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=l}^{\binom{D-l}{j_s=j_{ik}}} \binom{D-l-j_{sa}+1}{j_{sa}^{ik}} \binom{D-l-j_{sa}+1}{j_{sa}^{ik}} \binom{n}{n_i=n+k} \binom{n_i-j_s+1}{n_{is}=n+k} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{n_{ik}+j_{sa}-k_2}{n_{sa}=n+k_3-j_{sa}+1} \binom{n_{sa}+j_{sa}-j_i-k_3}{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{()} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{()} \\ & \sum_{j_{ik}=j^{sa}-l_{sa} (j^{sa}=j_i-l_i)}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_s+s-l} \\ & \sum_{n_{i_s}+l_{ik} (n_{i_s}=n+l_{ik}-j_s+1)}^n \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-l_{k_1}} \\ & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\ & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i=1}^{j_i=j_s} \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_i=1}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_s+n+s-D-1}^{l_i-l+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_i\}$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\quad)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = l_s + n + s - D - 1}^{l_{sa} + s - l - j_{sa} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - l_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{s_1}, j_{sa}^{s_2}, \dots, \mathbb{k}_2, j_{sa}^{s_3}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_s+n+s-D-1}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_1}, k_2, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\ \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \quad j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j^{sa}-j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_i+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq l_s < n \wedge l_s > D < n+1 \wedge$

$l_s \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$n - l_s \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)}$$

$$\sum_{j_i=j^{sa}+l_i-l_s}^{(l_s+j_{sa}-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{is}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - \mathbb{k}_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - \mathbb{k}_3 - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \dots + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} (j_{sa}=l_i+n_{i_s}-D-s) j_i=j_{sa}+l_{ik}-l_{sa}$$

$$\sum_{n_i=0}^n (n_i=n_{i_s}+1) n_{ik}=j_{ik}+1$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{i_s}-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{(l_{ik}=j_{sa}-l_s+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{n_i=l_i+n+j_{ik}-D-s} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_s=j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1} \sum_{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZÜMÜYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}-k-l_{sa}}^{(l_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - s$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_2: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \dots > 0 \wedge$$

$$j_s < j_{sa}^{sa} - j_{sa}^{ik} < j_{sa}^{sa} - 1 \wedge j_{sa}^s = j_{sa}^{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{sa}, \dots, j_{sa}^{sa}\} \wedge$$

$$s \geq 6, \dots = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \dots = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_i - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_1}, k_2, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}+1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq 6 \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} - 1 \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$j_{sa} \geq n - l_{sa} \wedge I = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_1}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{j_{ik}+1}^{()}$$

$$\sum_{(j_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)} \sum_{(j^{sa}+1)}^{()} \sum_{(n-j_i+1)}^{()}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^i + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j_{sa} = l_{ik} + n + j_{sa}^{ik} - j_{sa}^i)}^{(j_i - j_{sa} - l_{ik})} \sum_{n_i=0}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{is} = n + j_{sa}^i - j_{sa} - 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} = j_{sa}^i - j_{sa} - 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = l_{sa} - j_{sa} + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_s = n - j_i + 1}^{(j_s - j_{ik} - \mathbb{k}_1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(n_i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa}^i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^i + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

GÜLDENMYA

$$fz \sum_{j_s=j_{ik}+l_s-l_{ik}}^S \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{j_{sa}=l_s+n_{is}-D-1} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n_{is}+1}^n \sum_{n_{ik}=n_{ik_2}+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+1)} \sum_{n_{sa}=n_{sa}-j_{sa}-\mathbb{k}_2}^{(n_{is}+1)} \sum_{n_s=n-j_i+1}^{(n_{is}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}-k-l_{sa}}^{(l+l+1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - l)!}{(D + l - n - l_i - j_i - l)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j^{sa} - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j^{sa} - n - l_i)!}{(D + j^{sa} - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = s > 0 \wedge$

$j_s < j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, j_{sa}^{ik}\} \wedge$

$s \geq 6, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_s \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \quad j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_i}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = j_i + 1}^{n_{sa} + j^{sa} - j_i - 1} \\
 & \frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_s - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - n_{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq \dots \wedge l_s > D \dots \wedge n + 1 \wedge$

$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$\dots \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_{sa} + j_{sa}^{ik} - l - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_s}^{(\cdot)}$$

$$\sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{is} + j_{ik} - l_{k_1})}^{n_{is} + j_{ik} - l_{k_1}}$$

$$\sum_{(n_{ik} + j_{ik} - l_{k_2})}^{(n_{ik} + j_{ik} - l_{k_2})} \sum_{(j^{sa} + 1)}^{n_{sa} + j^{sa} - l_{k_3}}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{is} - l_{k_2} - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = \dots + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} (j_{sa} = j_{ik} - l_{ik}) j_i = j_{sa} + j_{sa} - j_{ik} - \mathbb{k}_1$$

$$\sum_{n_i=0}^n (n_{is} = n + j_{sa}^{ik} - 1) n_{ik} = j_{ik} + 1$$

$$\sum_{(n_{sa} = \dots - j_{sa} + 1)}^{(n_{sa} = \dots - j_{sa} + 1)} n_{sa} + j_{sa} - j_i - \mathbb{k}_2$$

$$\sum_{n_s = n - j_i + 1}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_{ik}+l_s-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n}^n \sum_{(n_i=n+k_1-1)}^{(n_i-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{l_s+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+l_{sa}^{ik}-D-j_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

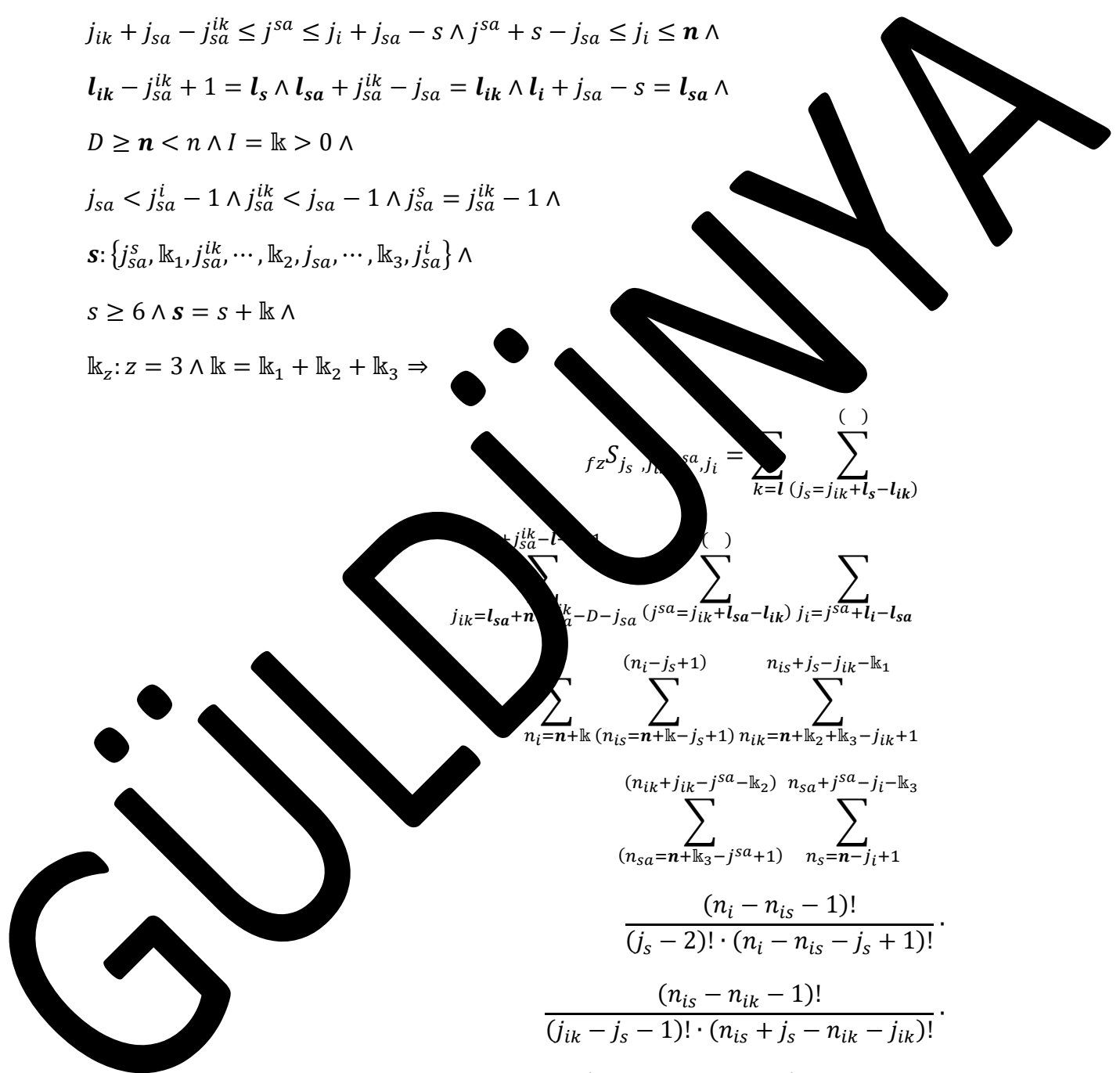
$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{k-l+1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_s$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - j_{sa}^i \wedge j_{sa}^i = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + 1 \wedge$

$\mathbb{k}_3: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \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}-l} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j^{sa} - n - 1)!}{(n_s + j^{sa} - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j^{sa} - n - l_i)!}{(D + j^{sa} - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = j^{sa} > 0 \wedge$$

$$j_s < j_{sa}^{ik} - j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^{ik}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 6, j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s, j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_1}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3, k_s = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa} \leq j^{sa} < j_i + j_{sa} - j_s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{ik} - j_{sa} - 1 = l_s \wedge l_{sa} \quad j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{i-1}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_{i-1}} \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{i-1}-n_{is}+n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{i-1}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)!(n_{i-1}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$D \geq \dots < n \wedge l_s > D \dots n+1 \wedge$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{i-1} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{i-1} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$l_s \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_1}-j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j_i-1)! \cdot (n_s=n-j_i-l_{k_3})!}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_s-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(\cdot)} \sum_{i=j_{sa}^{ik}-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=l}^{(j_s=j_{ik})} \dots$$

$$\sum_{j_{ik}=s+n+l}^{l_{ik}-l+1} \sum_{(n_i=n+l)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l)}^{(n_{is}+j_s-j_{ik}-k_1)} \dots$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{sa}-j_i-k_3)} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik} = l_s + l_{ik} - l_s}^{n} \sum_{j_{sa} = j_{sa}^{ik} + l_{sa} - l_{ik}}^{(j_{sa}^{ik} - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(l-s+2)} \\ & \sum_{n_i = n + \mathbb{k} - j_s + 1}^{n} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_i\}$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbb{k} = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_i - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{l_1}, k_2, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 0 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \geq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{sa}-j_i-l_{k_3})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_s + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_3} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-l-s+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j_{sa}=j_{ik}+k_1)}^{()} \sum_{j_i=j_s+l_i-l_{sa}}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-1)}^{(n_{is}+j_s-1)} \sum_{(n_{ik}+k_2+k_3-j_{ik}+1)}^{(n_{ik}+k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}-j_{sa}-1)}^{(n_{ik}-j_{sa}-1)} \sum_{(n_{sa}-j_i-k_3)}^{(n_{sa}-j_i-k_3)}$$

$$\sum_{(n_{sa}-n_s-k_3+1)}^{(n_{sa}-n_s-k_3+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - n_s - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

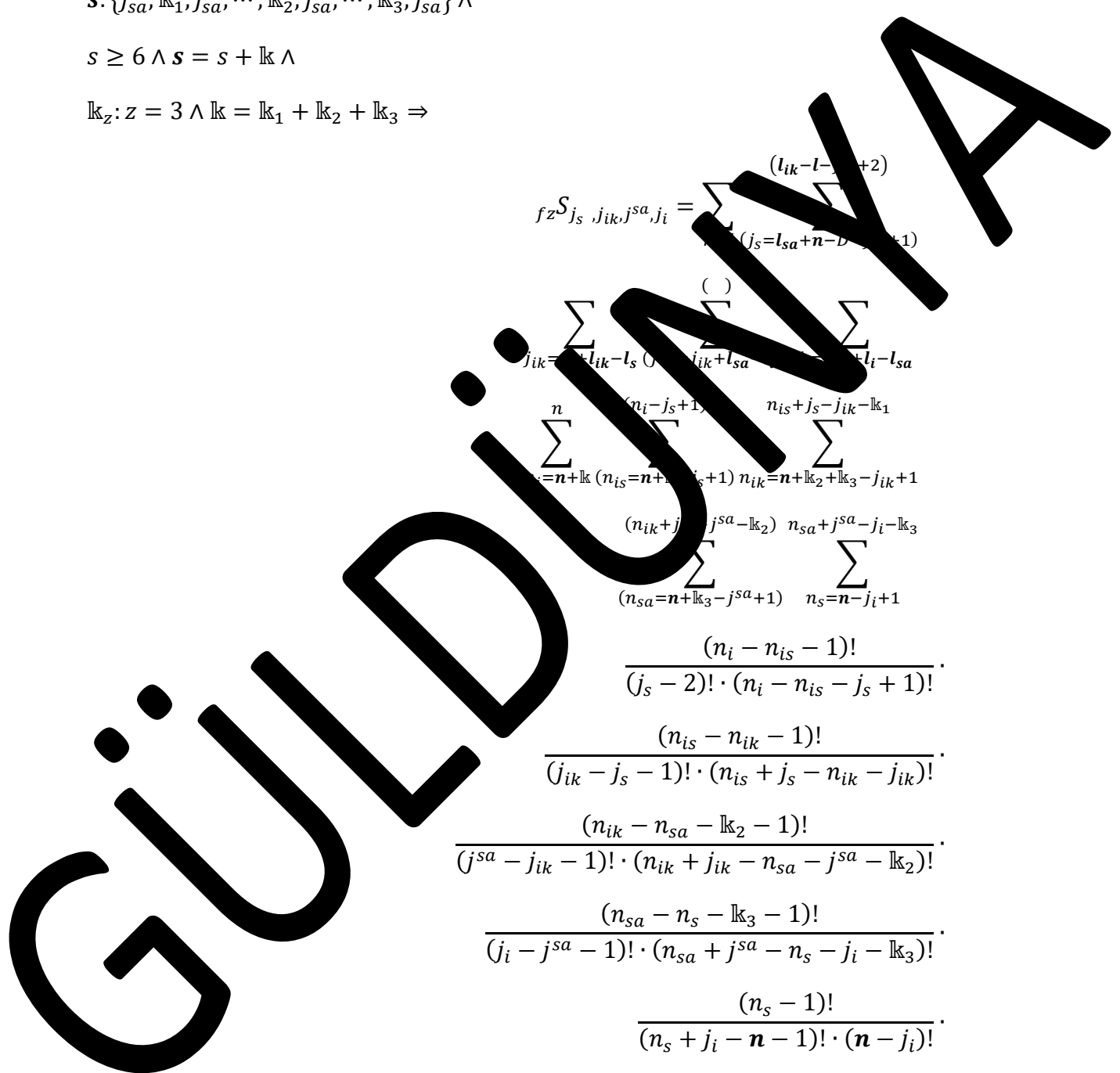
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \frac{(l_{ik} - l_s + 2)}{(j_s = l_{sa} + n - D + 1)} \cdot \sum_{j_{ik} = l_{ik} - l_s}^{()} \sum_{j_{sa} = j_{sa}^{ik} + l_{sa}}^{()} \sum_{j_i = l_i - l_{sa}}^{()} \frac{(n_i - j_s + 1)}{\sum_{n_i = n + k}^n} \frac{(n_{is} + j_s - j_{ik} - k_1)}{\sum_{n_{is} = n + k_1}^{(n_{is} = n + k_1 + 1)}} \frac{(n_{ik} + j_{sa} - k_2)}{\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}} \frac{(n_{sa} + j_{sa} - j_i - k_3)}{\sum_{n_s = n - j_i + 1}} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

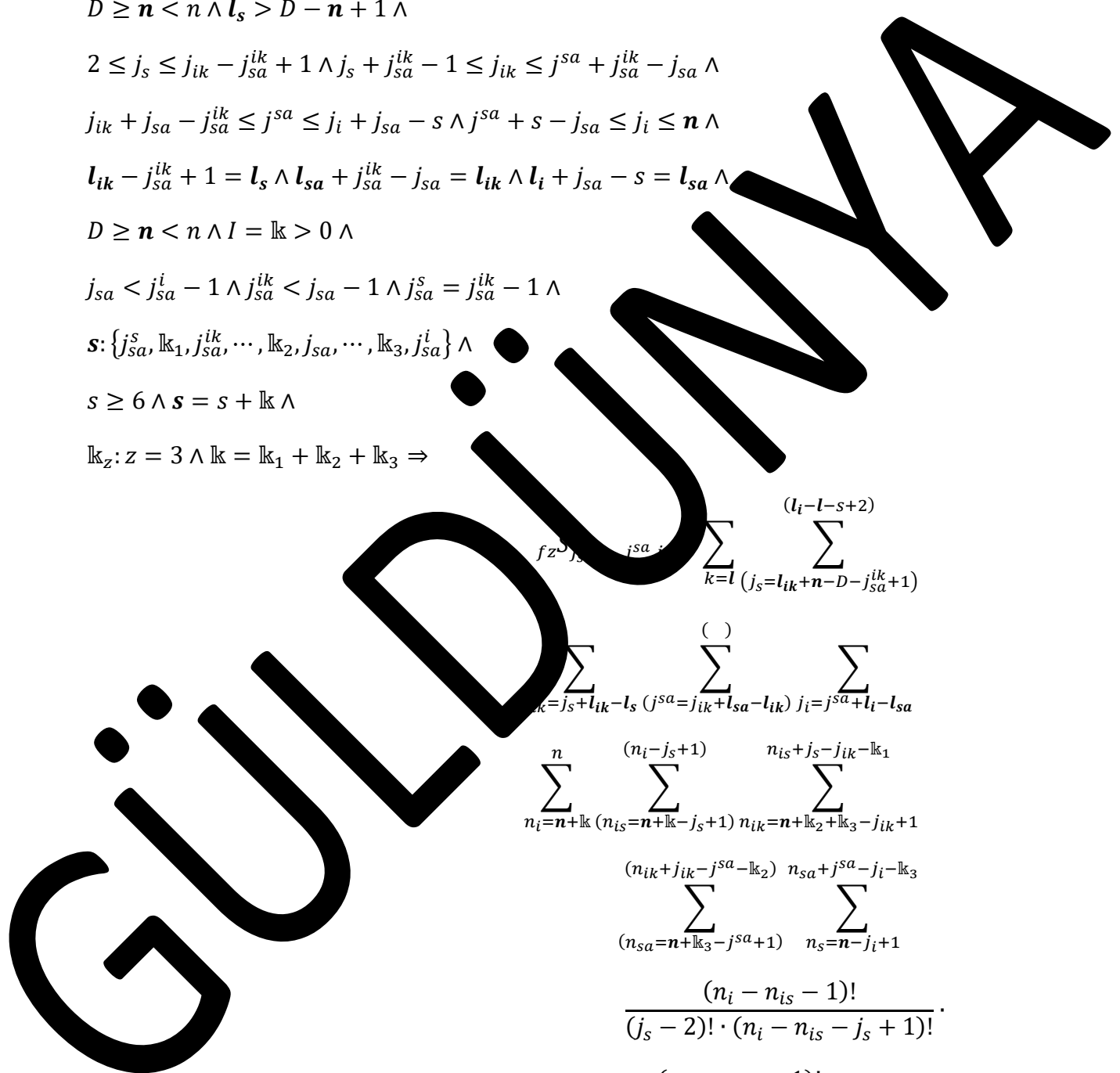
$$\sum_{k=1}^{(l_i - l - s + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$



$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$

$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s \geq 6 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_i - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{l_1}, \mathbb{k}_2, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 0 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$z \bullet j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_k - j_{sa} - 1 = l_s \wedge l_{sa} \bullet j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s \wedge l_{sa} \wedge$

$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq \langle n \wedge l_s \rangle \wedge D \geq n+1$$

$$s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_i-j_i-l_{k_3})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)} \sum_{n_s=n-j_i-1}^{n_{sa}+j_i-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > n - 1 \wedge$$

$$2 \leq l \leq D \wedge l_s + s - n - l_i \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_{ik}-s)}^{()} \sum_{j_i=l_i+l_{ik}}^{()} \sum_{(j_i=j_s+1)}^{()} \sum_{(j_s=j_{ik}-\mathbb{k}_1)}^{()} \sum_{(n_{is}=n_{ik}+1)}^{()} \sum_{(n_{ik}=j_{ik}+1)}^{()} \sum_{(n_{ik}+j_{ik}-n_{sa}-\mathbb{k}_2)}^{()} \sum_{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}^{()} \sum_{(n_{sa}=n_{ik}-\mathbb{k}_3-j_{sa}+1)}^{()} \sum_{n_s=n-j_i+1}^{()}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

GÜLDÜZÜMÜYA

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{l_{sa}+s-l-j_{sa}+1} \sum_{j_i=l_i+n-D}^{j^{sa}=l_{sa}+n-D}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i+l_k-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_{sa}-l+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{l_i-l+1} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_{sa}+s-l-j_{sa}+2}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i+l_k-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > D - n \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$\mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)} \sum_{l_i-l+1} \\
 & \sum_{n_i=n+l_k} \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s-j_i+1} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_i + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+j_{sa})}^{(\cdot)} \sum_{(i=l_i-D)}^{(\cdot)} \frac{l_{ik}-l-j_{sa}+1}{(j_s-l)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \frac{(n_{is}+j_s-j_{ik})!}{(n_{ik}-j_{sa}-k_2-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-k_2)!}$$

$$\frac{(n_{ik}-j_{sa}-k_2-1)!}{(n_{ik}-j_{sa}-k_2-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

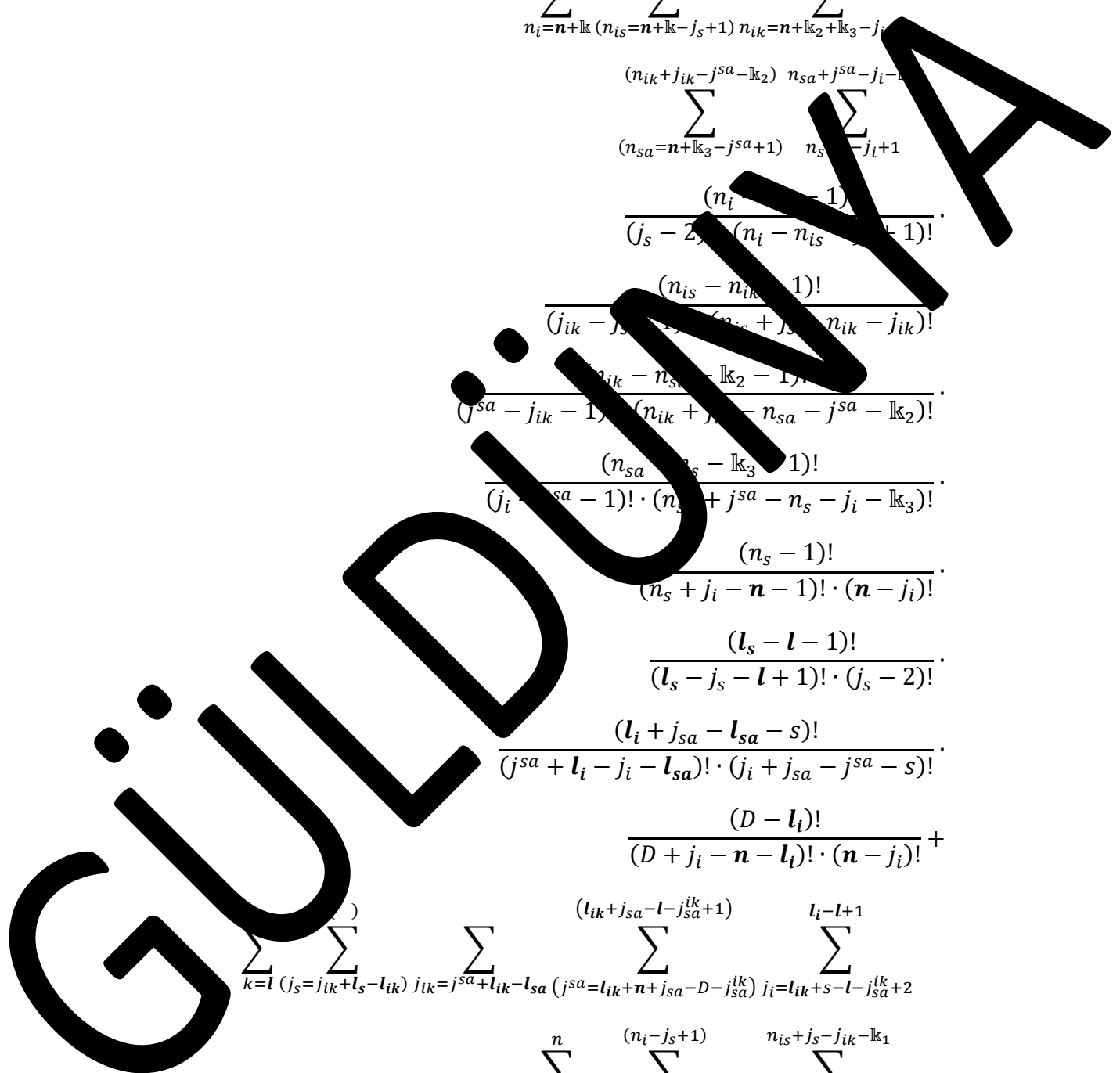
$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \Bigg) +$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)} \sum_{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{\dots} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_s=n-j_i+1}
 \end{aligned}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - 1)!}{(j^{sa} + l_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > D - n + 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$s = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(l_i-l+1)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=j_i+1)}^{n_{sa}+j^{sa}-j_i-l} \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_{is}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l = D - l_i + 1 \wedge$

$2 \leq l \leq l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l_s-l_{ik}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{j_{sa}=j_i+l_{sa}} \sum_{i=l_i} \binom{()}{l_{ik}=l-j_{sa}^{ik}+1} \sum_{n_i=n+k}^{n} \binom{(n_i-j_s+1)}{n_i-k} \sum_{n_{ik}=n_{sa}+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}} \binom{(n_{ik}-j_{sa}-k_2)}{n_{ik}-j_i-k_3} \frac{(n_i-n_{is}-1)!}{(j_s-1)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l_s-l_{ik}} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{is}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} +$$

$$\sum_{k=l} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDENWA

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq \dots \wedge D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \dots \wedge n \wedge l = \mathbb{k} > \dots \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_i+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i+j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-\mathbb{k}_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_i \geq D - l + 1 \wedge$

$2 \leq l_i \leq l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{l_{ik}=l-j_{sa}^{ik}+1} \binom{(\quad)}{\quad} \sum_{j_i=l_i-D} \binom{(\quad)}{\quad}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{\quad} \sum_{n_{ik}=n_s+k_2-j_{ik}+1} \binom{(n_{ik}-j_{sa}-k_2)}{\quad} \sum_{n_s=n-j_i+1} \binom{(n_s-j_i+1)}{\quad}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \Bigg) +$$

$$\left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad} \right)$$

GÜLDÜSÜYA

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{j^{sa}+j_{sa}^{lk}-j_{sa}-1} \sum_{j_{ik}=l_{ik}+n-D}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{l_{ik}+s-l-j_{sa}^{lk}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{ik} - j_{sa} - l_{sa})!} \cdot \frac{(l_i - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + l_i - s \wedge j^{sa} + s - j_i \leq j_i \leq j_s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: (j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{ik}, \mathbb{k}_3, j_{sa}^i)$

$s \geq 0, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3, \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq l_s \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f z_{j_s, j_{ik}, j^{sa}, j_i} = & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j^{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j^{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j^{sa}-D-1)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(n)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)} \sum_{j_i=l_s+s-l+1}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$

$s > 6 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \dots + \mathbb{k}_2 + \dots \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)}^{(l_i - l + 1)} \sum_{j_i = l_i + n - D}^{(n_i + j_s - j_{ik} - \mathbb{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 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \sum_{n_s = n - j_i + 1}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s)!} \cdot \frac{(n_s - l - 1)!}{(n_s - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq l \leq D + l_s + s - n - 1$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ls} - 1 \leq j_{ik} \leq j_s^a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{ik} \leq j_s^a \wedge j_i + j_{sa} - s \wedge j_s^a - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s^a - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^a, j_{sa}^{ik}, \dots, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$s = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\sum_{j_s=j_{ik}+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) +
 \end{aligned}$$

$$\left(\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{(\quad)}{\sum_{j_s=j_{ik}+l_s-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = n + l_s - l_{ik})}^{\binom{()}{}} \sum_{j_{ik} = n + j^{sa} - D - 1}^{l_s + l - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{\binom{()}{}} \sum_{j_i = l_s + s - l + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{ik} - j_{sa}^{ik} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq l \leq D + l_s + s - n - l_i$$

$$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i)}{n_s=n-j_i+1}} \\
 & \frac{\binom{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!}}{\binom{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!}} \\
 & \frac{\binom{(n_{ik}-n_{sa}-k_2-1)}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!}}{\binom{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-k_3)!}} \\
 & \frac{\binom{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}}{\binom{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}} \\
 & \left. \frac{\binom{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{(j_{ik}-j_{sa}^{ik})}{(j_s=l_s+n-D)}} \right) \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{n_{sa}=n+k_3-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i-k_3)}{n_s=n-j_i+1}}
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(n_s - l - 1)!} \cdot (j_s - 2)! \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - l_s - j_{sa}^{ik} + 1)!} \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)! \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{(l_s)} \sum_{j^{sa}+l_{ik}-l_{sa}}^{(l_s)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{(l_s)} \sum_{j_i=l_s+s-l+1}^{(l_s)} \\
 & \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDÜZ

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_i - j_{sa} + 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i - l + 1)} \sum_{(j_{ik} = j^{sa} + l_{ik} - l_{sa})}^{(j^{sa} = j_i + l_{sa} - l_i)} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - 1)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(j_i - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > n \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

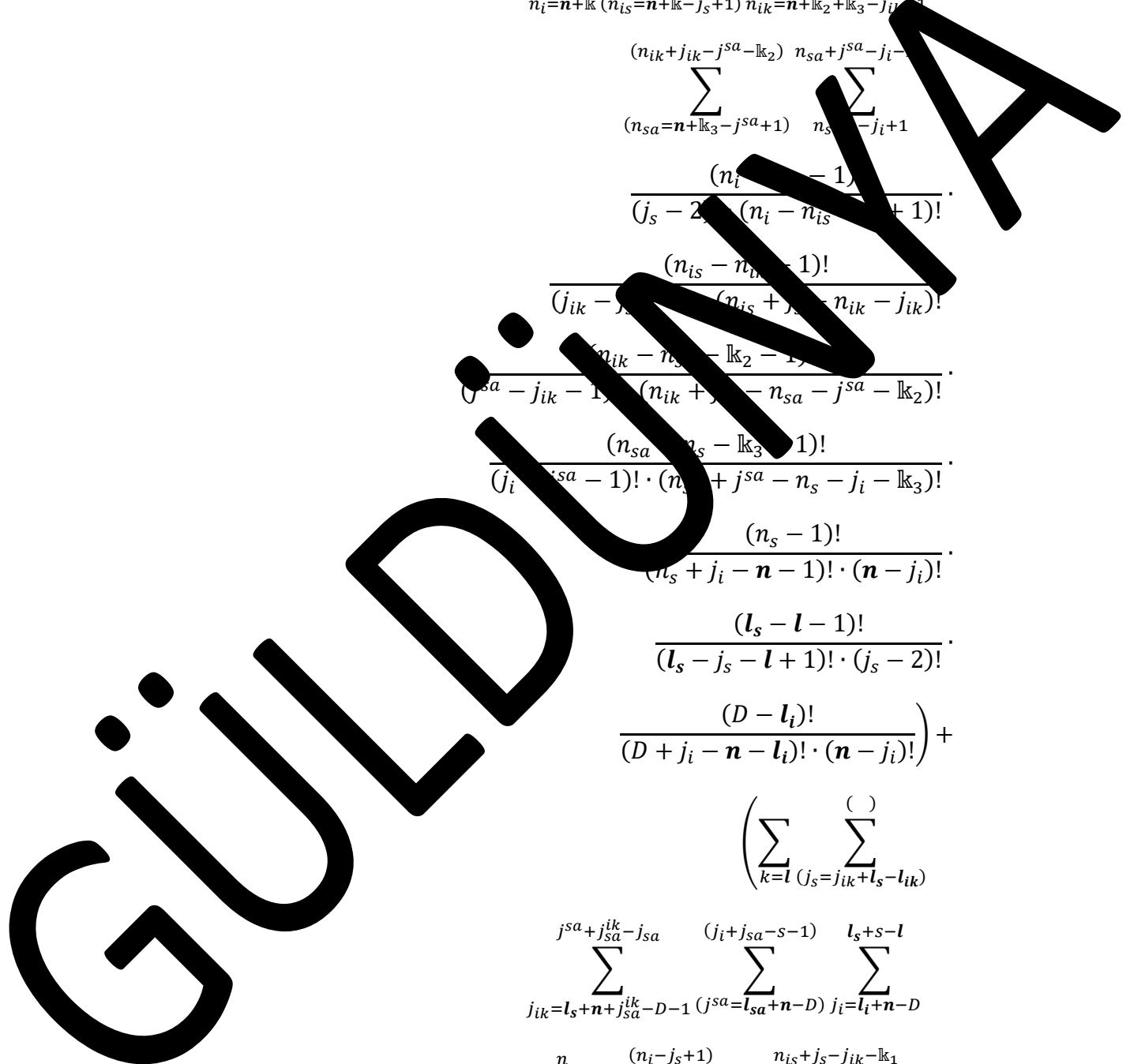
$$\mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\sum_{j_i=l_i+n-D}^{l_s+s-l}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i-n_{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-\mathbb{k}_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)!(j_s-2)!} \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} \right) +
 \end{aligned}$$

$$\left(\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(j_i+j_{sa}-s-1)}{\sum_{j_i=l_i+n-D}^{l_s+s-l}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}
 \end{aligned}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n - l - 1)!} \cdot \\
 & \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{(j_s=j_{ik}+l_s-l)}^{j_s^{ik}-l} \sum_{(n_{is}=n+l_s+l_{sa}-D-1)}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \\
 & \sum_{n_i=n+l_s}^n \sum_{(n_{is}=n+l_s-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_s+l_{sa}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+l_s-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZ

AYLA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l)!}{(n - l)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{\binom{j_s = j_{ik} + l_{sa} - j^{sa} - l_{ik}}{j_{ik} = l_s + n + j_{sa}^{ik} - 1} \binom{j_s - l}{j_i = l_i + n - D}}$$

$$\sum_{\binom{n_i - j_s}{n_i = n + \mathbb{k}_2 - j_s + 1}} \sum_{\binom{n_{is} + j_s - j_{ik} - \mathbb{k}_1}{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}}$$

$$\sum_{\binom{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}} \sum_{\binom{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}{n_s = n - j_i + 1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n < n \wedge \mathbb{k} = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 \leq j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{sa}^{ik}, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = \mathbb{k} \wedge$

$\mathbb{k}_2 = \mathbb{k} - \mathbb{k}_1 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\ \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik}-j_{i_s}^{l_k}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(j_i+j_{sa}-s-1) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{\substack{l_s+s-l \\ j_i=l_i+n-D}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - l_s + 1)! \cdot (j_{ik} - j^{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j^{sa} - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{l_s} \sum_{j^{sa}+l_{ik}-l_{sa}}^{l_{sa}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j^{sa} = j_i - l_i)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(l_i + n - D)}^{(l_s + s - l)}$$

$$\sum_{(n_i = n + k)}^n \sum_{(n_{is} = n + k_1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j^{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_i}^{s, j_i} &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \\ &\sum_{k=j_{sa}^{ik} + l_{ik} - l_{sa}}^{(l_{sa} - l + 1)} \sum_{(j^{sa} = l_{sa} + n - D)}^{l_i - l + 1} \sum_{j_i = l_i + n - D} \\ &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\ &\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i)!}{(D + l_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 6 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots =$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜMÜNYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{l_s=0}^{(l_s-1)} \sum_{j_s=0}^{(n-D)-j_s} \sum_{l_{ik}=0}^{l_{ik}-l+1} \sum_{j_{ik}=0}^{l_{ik}+n-D-j_s} \sum_{j_i=0}^{(j_i-1)} \sum_{j_i=0}^{l_i-l+1}$$

$$\sum_{n_{is}=0}^{n_{is}+l_{ik}-j_s+1} \sum_{n_{ik}=0}^{(n_{is}-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_{sa} - l_i)} \sum_{j_i = l_i + n - j_{sa} - j_{sa}^{ik} - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{n_{is} = n + \mathbb{k}_2 - j_{sa} - j_{sa}^{ik} - j_{sa}}^{j_s} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa})}^{(n_{sa} = n_{sa} - j_{sa} - j_{sa}^{ik} - j_{sa})} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

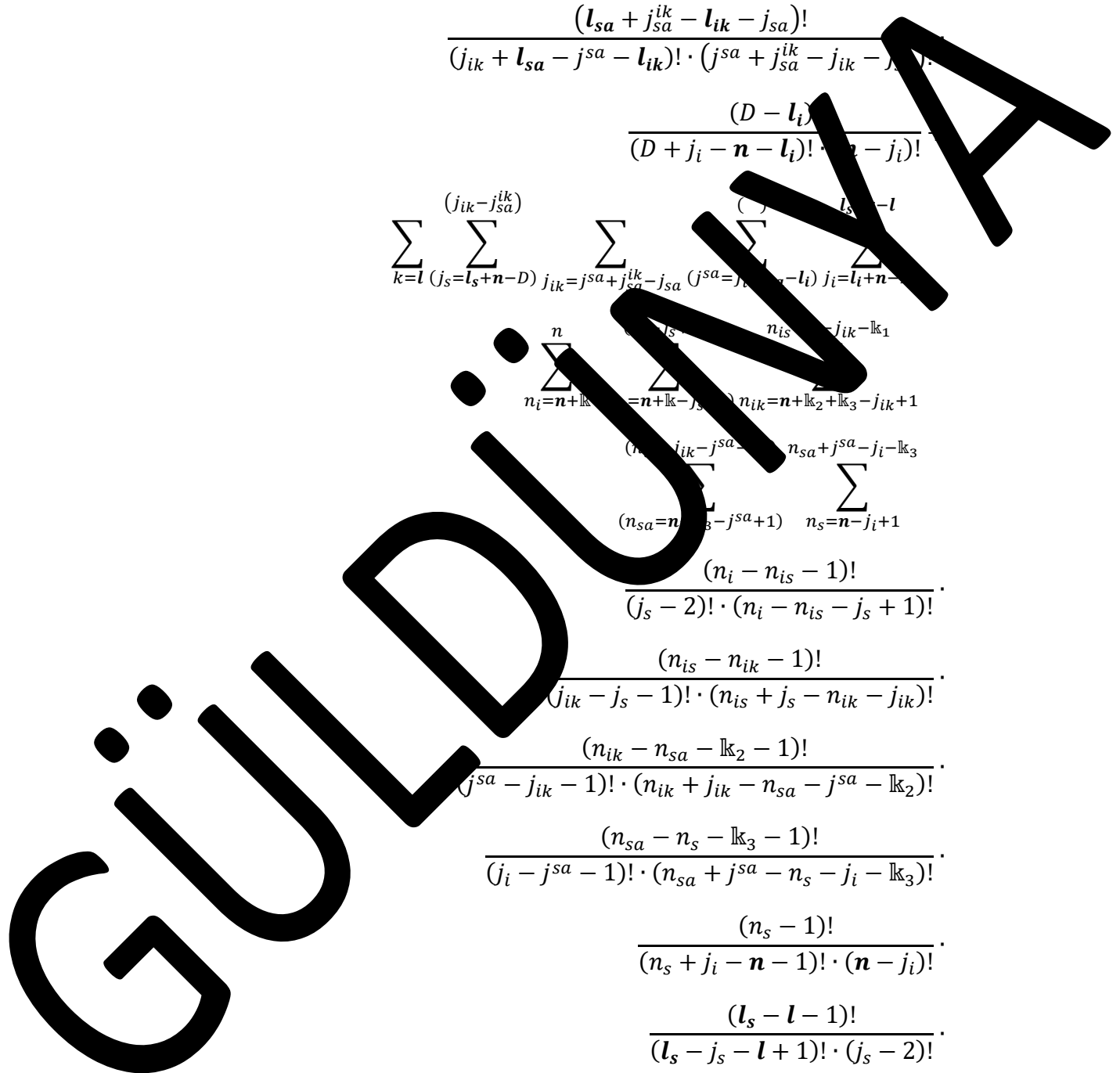
$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS}^{j_s, j_i, j_{sa}, j_{ik}} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1, j_{sa} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \cdot 6 \wedge s = \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{j_i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=n+k} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_{ik}=j^{sa}+l_{ik})} \sum_{(j^{sa}=l_s+n-D)} \sum_{(j_i=l_i+n-D)}^{n+j_{sa}-l-i+1}$$

$$\sum_{n_i=n+...}^{n} \sum_{(n_i-j_s-l)}^{(n_i-j_s-l)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k} \binom{(n_i-j_s+1)}{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)} \binom{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} \right) + \\
 & \sum_{j_{ik}=j} \sum_{n_{ik}=l_{sa}} \sum_{(j^{sa}=l_i + j^{sa} - D - s)} \sum_{j_i=j^{sa} + s - j_{sa} + 1} \sum_{(n_i - j_s)} \sum_{n_{is}=n + \mathbb{k} - j_s + 1} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1} \sum_{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{l_i - l + 1} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})} \sum_{j_i = l_i + n - \dots} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = \dots}^{n_{is} + j_s - k - k_1} \sum_{j_{ik} + 1} \\
 & \sum_{(n_{ik} + j_{ik} - \dots)}^{(k_2)} \sum_{(n_{sa} + j^{sa} - \dots)}^{(k_3)} \sum_{j^{sa} + 1} \sum_{= n - j_i + 1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_2 - 1)!}{(j^{sa} - \dots - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - \dots - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{j_s} \sum_{(j_s=j_{ik})}^{j_s} l_{ik} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{l_i+j_{sa}-l-j_{sa}^{ik}} \sum_{(j_{sa}=n+l_{sa}+j_{sa}^{ik})}^{l_i-l_{sa}} \sum_{n+l_k}^n \sum_{(n_{is}=n+l_{sa}+1)}^{(i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)^+$$

GÜLDENWA

$$\left(\sum_{k=l} \sum_{j_s=j_{ik}+l_s-l_{ik}} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i-}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_i=j^{sa}+l_i-}$$

$$\sum_{(n_{sa}=n+k_3-j_s+1)}^{(n_{ik}+j_{ik}-j^{sa}-j_{sa}+j_i-k_3)} \sum_{n_s=n-j_i-}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{j_s=j_{ik}+l_s-l_{ik}} \binom{(\quad)}{\quad} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

GÜLDÜZÜMÜ

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - l_i + 1 \leq l \leq D - n + l \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > l_i - n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - k_1, j_{sa}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l}^{(\)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_i+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(\cdot)} \sum_{j_s=j_{sa}-l_{ik}}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{n+j_{sa}-D}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{i=j_{sa}+s-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{(n_{is}+l_{ik}-j_s+1)}^{(n_i-1)} \sum_{n=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-1)}$$

$$\sum_{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{sa}-\mathbb{k}_3-j_{sa}+1)}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

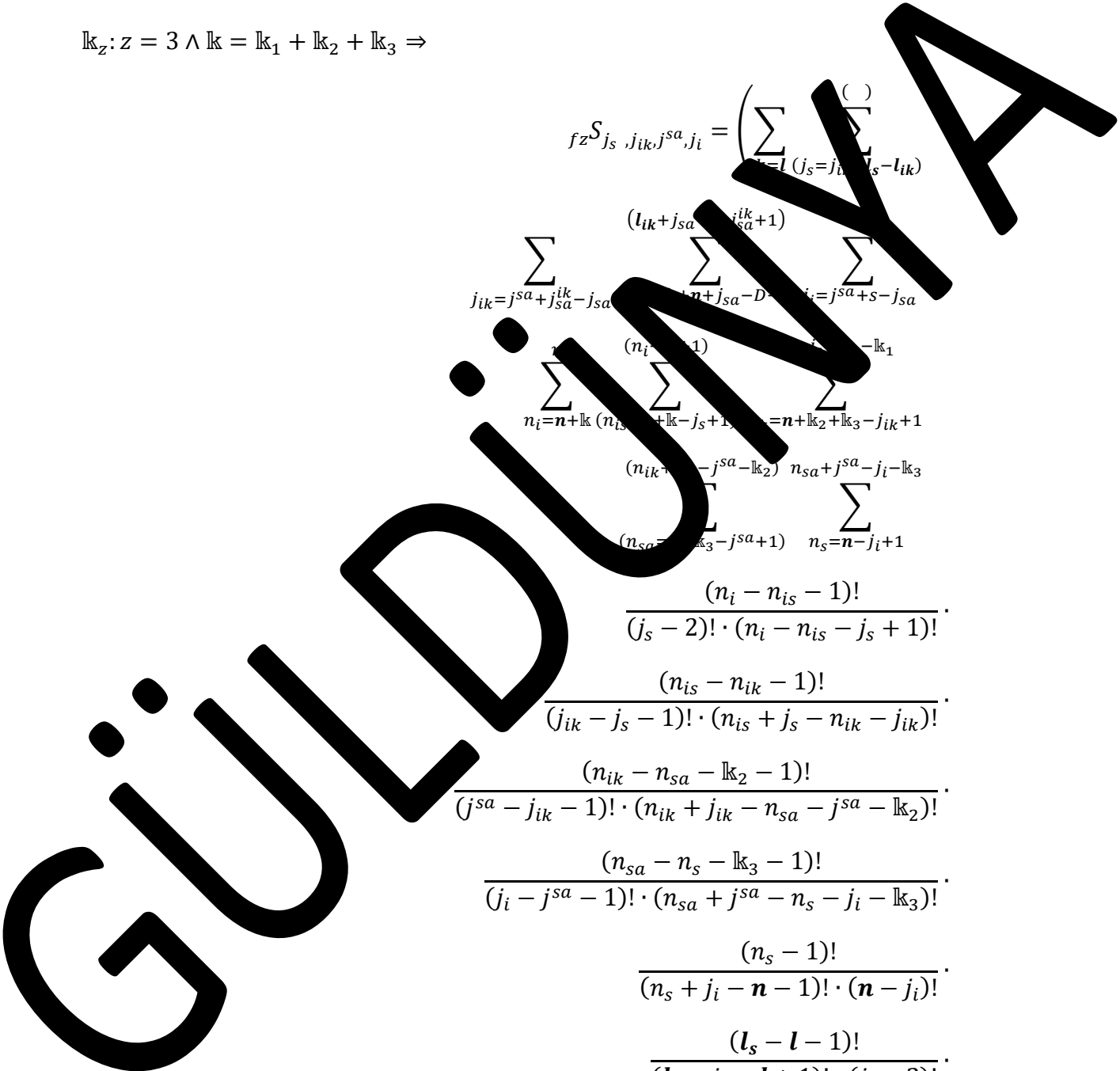
$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \dots \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2}-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1}-j_{ik}+1)!}{(n_{sa}=n+l_{k_3}-j_{ik}-1)! \cdot (n_s=n-j_i+l_{k_3}-1)!} \cdot \frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{is}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(n_{ik}+j_{ik}-n_{sa}-j_{sa}-l_{k_2})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!}$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!}$$

$$\frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j^{s_a} - n_s - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!}$$

$$\frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^l \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()} \sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-l+1} \sum_{(j^{s_a}=l_{i_k}+j_{s_a}-l-j_{s_a}^{i_k}+2)}^{(l_{s_a}-l+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

GÜLDENSTÄUBCHEN

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - l - 1)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{\binom{j^{sa} + j_{sa}^{ik} - 1}{j_{ik} + l_s - l_{ik}}} \sum_{j_{ik} = j_{sa}^{ik} - D - 1}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDÜZ

AYLA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_i \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\}$

$s - 6 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{j_i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_s+j_{sa}-l) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=n+k} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - s)!}$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_i)}^{()} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})}^{()} \sum_{(n_{sa}=l_s+n_{sa}-D-1)}^{()} \sum_{(j_i=l_i+n-D)}^{()}$$

$$\sum_{(n_i=n)}^{(n)} \sum_{(n_{is}=n+l_{is}+1)}^{(n_i-j_{ik})} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^l\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{ik=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k} \sum_{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} +$$

$$\sum_{j_{ik}=l_s}^{j^{sa}+j_{ik}-j_{sa}-1} \sum_{j_{sa}=j_{sa}-D-1}^{j_{sa}-1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+j_{sa}-D)}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+l_k+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(l_i+j_{sa}-l-s+1)}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n-k}^{(n_{ik}+j_{ik}-j_s-k_1)}^{n_{is}+j_s-k-k_1} \sum_{(j_i-n+k_1-k_2)}^{()} \sum_{(n_{sa}+j^{sa}-j_i)}^{()} \sum_{(j_i-n+k_1-k_2)}^{()} \sum_{(n_{is}-j_s+1)}^{(n_i-n_{is}-k_1-k_2)} \frac{(n_i - n_{is} - k_1 - k_2)!}{(n_i - j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - n + k_1 - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{\dots} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{\dots} \sum_{n_i=1}^n \sum_{n_{is}=n+k_1}^{(n_i-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i-1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \right)$$

GÜLDENMYA

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_i + j_{sa} - l)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_s + 1)}^{(n_{is} + j_s - 1) - k_1}$$

$$\sum_{(n_{sa} = k_3 - j^{sa} + 1)}^{(j_{ik} - j^{sa} - k_2) - n_{sa} + j^{sa} - j_i - k_3} j_i + 1$$

$$\frac{(n - n_{is} - 1)!}{(j_s - 2)! \cdot (n - n_{is} - j_s + 1)!}$$

$$\frac{(n - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - l + 1)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{n_s=n-j_i+1} \cdot \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D > n < n \wedge l_s > n + 1$

$D + l_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_i+j_{sa}-l-s+1)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_{ik}-lk_1)}^{(n_i-j_s+1)}$$

$$\sum_{(n_{ik}+j_{ik}-lk_2)}^{(n_{is}+j_{ik}-lk_1)} \sum_{(n_{sa}+j_{ik}-lk_3)}^{(n_{is}+j_{ik}-lk_1)}$$

$$\frac{(n_i - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - lk_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - lk_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - lk_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(j_s - j_{ik})} \dots \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{(l_s+j_{sa}-l)} \sum_{j_{sa}^{ik}=n+j_{sa}-j_{sa}^{ik}}^{(j_{sa}-n+j_{sa}-j_{sa}^{ik})} \sum_{j_i=n+j_{sa}-j_{sa}^{ik}-j_{sa}}^{(n+j_{sa}-j_{sa}^{ik}-j_{sa})}$$

$$\sum_{n=n+k}^n \sum_{n_{is}=n+k}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDENWA

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}-1)! \cdot (n_s=n-j_i-k_3)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

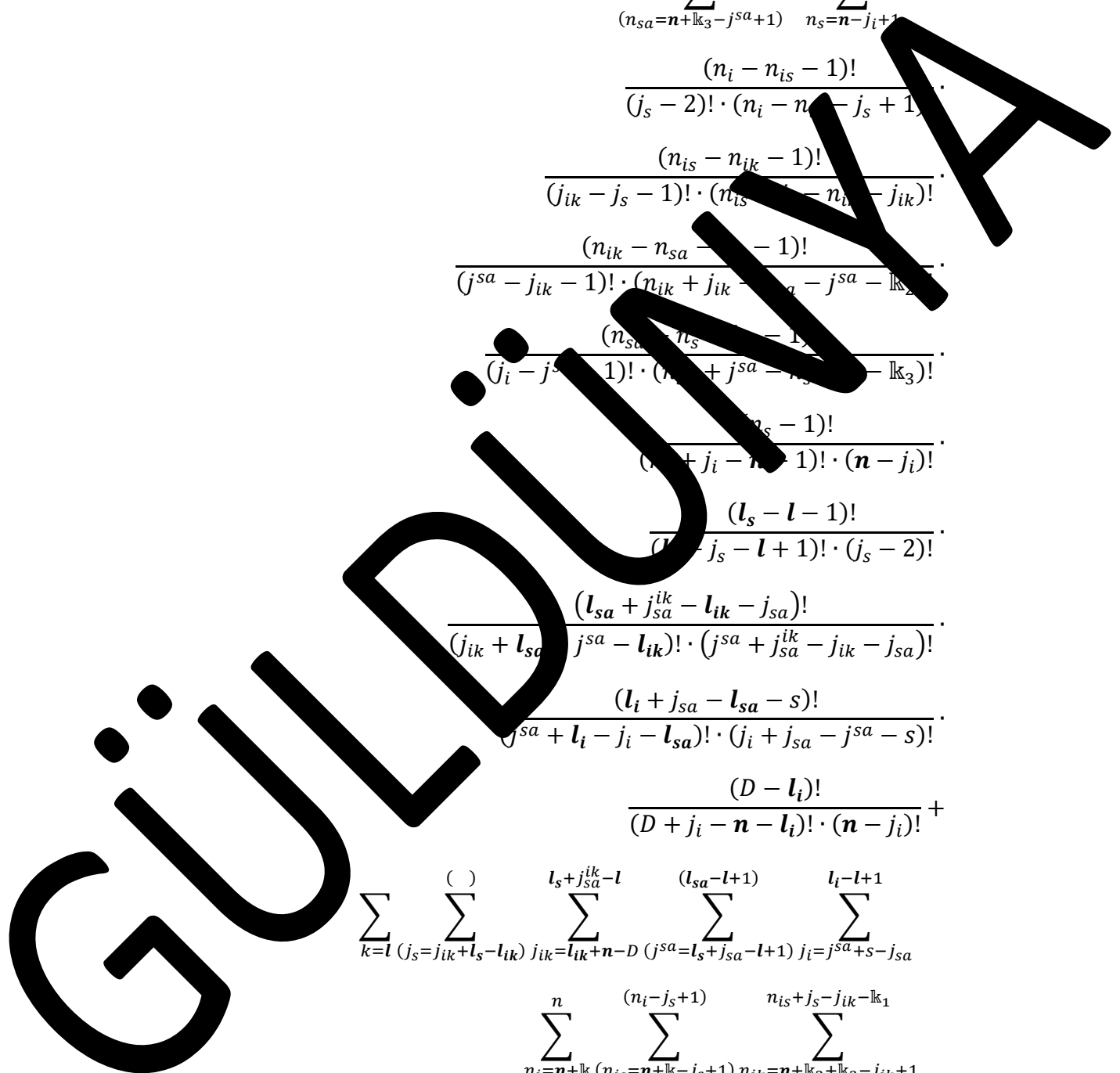
$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDÜZMAYA

$$\sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}=n+k_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-k_3}{n_s=n-j_i+1} \cdot \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{\binom{(\cdot)}{(j_s=j_{ik}+l_s-l_{ik})}} \sum_{\substack{l_s+j_{sa}^{ik}-l \\ j_{ik}=l_{ik}+n-D}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}}}$$

$$\sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}=n+k_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-k_3}{n_s=n-j_i+1}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - j_i - 1)!} \cdot \\
 & \frac{(n_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l=1}^{j^{sa} + j_s^{ik} - j^{sa} - 1} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{l_{ik} + n - D}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}
 \end{aligned}$$

GÜLDÜZ

AYLA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_s - l)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\}$

$s_1 = 6 \wedge s = \mathbb{k} + \mathbb{k}$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right) \\
 & \sum_{i_k=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=\mathbf{n}+k}^n \sum_{(n_{is}=\mathbf{n}+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_s - l_s - 1)! \cdot (j_i + j_s - j^{sa} - s)!}$$

$$\frac{(D - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(j_{ik}-j_{sa})} \sum_{j_s=0}^{(n+j_{sa}-l_s-1)} \sum_{j_{ik}=j_s}^{l_i-l+1} \sum_{l_{sa}=0}^{n+l_{sa}-D} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^n \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+j_s+1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

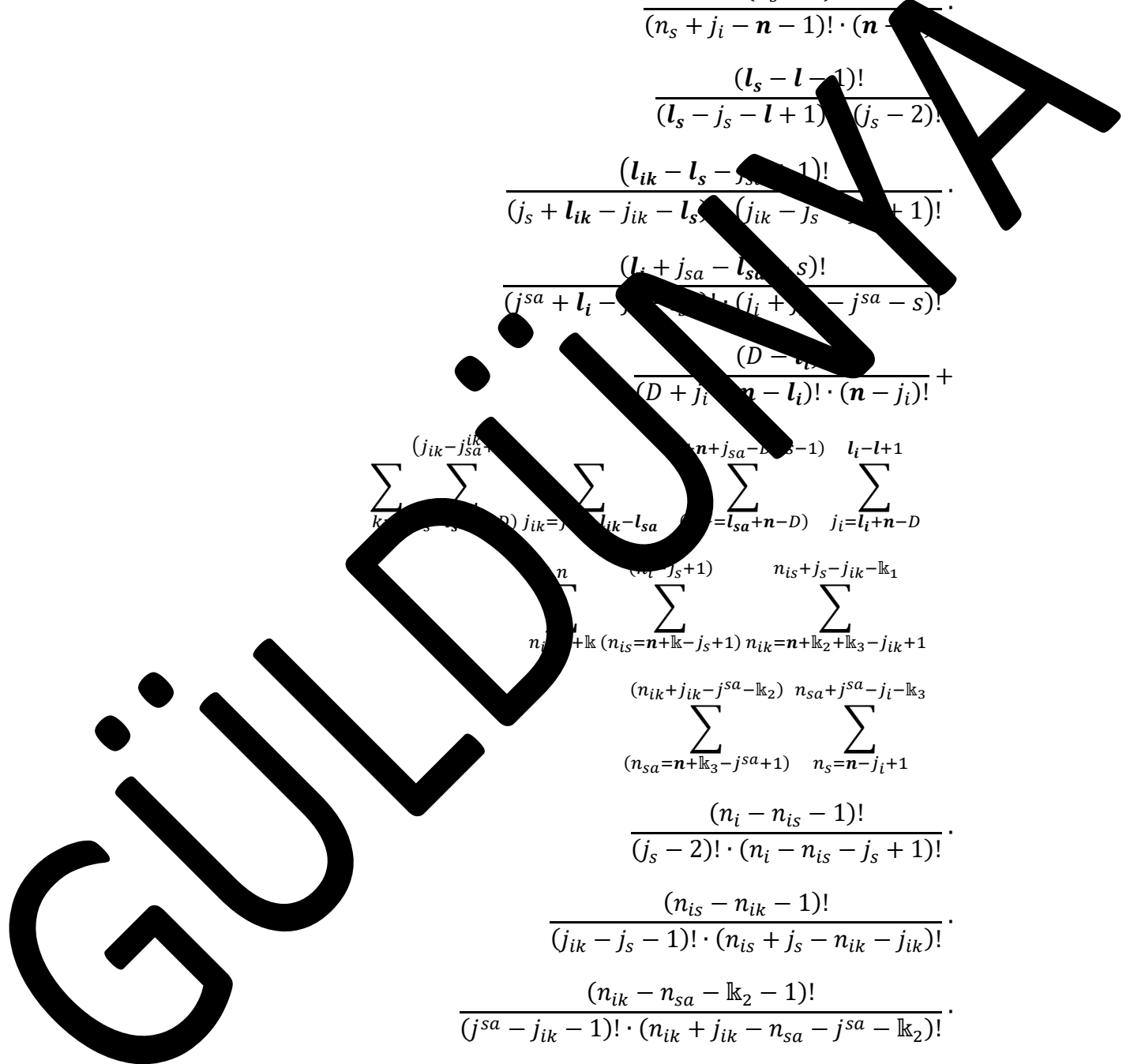
$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l)} \sum_{(j^{sa}=l_s+j_s-l+1)}^{(l_i-1)} \sum_{j_i=j^{sa}+s-1}^{(n-j_s-j_{ik}-l_{k_1})} \\
 & \sum_{n_i=n-j_{ik}+1}^n \sum_{(n_{is}=n+l_{k_1}+1)}^{(n-j_s-j_{ik}-l_{k_1})} \sum_{n_{ik}=n+l_{k_2}}^{(n-j_{ik}+1)} \sum_{(n_{sa}=n-l_{k_3}-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

GÜLDÜMNA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k - k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_3}$$

$$\sum_{(n_{sa} = n + k - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i - k_3}^{n_{sa} + j_s - j_i - k_3}$$

$$\frac{(n_i - j_s - 1)!}{(n_i - j_s + 1)! \cdot (n_i - j_s + 1)!}$$

$$\frac{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - j_s - k_2 - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - j_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(s)} \sum_{j_s=j_{ik}+1}^{(j_{sa}^{ik}+1)} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+l-1)} \sum_{n_i=n+j_{sa}-D}^{(n_i+l-1)} \sum_{n_{is}=n+j_{sa}-D}^{(n_{is}+l-1)} \sum_{n_{ik}=n+l-l_{sa}}^{(n_{ik}+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i+l-1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)} \sum_{n_{sa}=n+j_{sa}-j_{ik}-\mathbb{k}_2}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZYA

$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(j^{sa}-j_i-l_{k3})} \sum_{(n_{sa}=n+l_{k3}-j^{sa})}^{(j^{sa}-j_i-l_{k3})} \sum_{n_s=n-j_i+1}^{(n_{sa}-j^{sa}-j_i-l_{k3})} \frac{(n_{is}-j_{ik}-1)!}{(j_s-j_{ik}-1)! \cdot (n_i-j_{ik}+1)!} \cdot \frac{(n_{is}-j_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k2}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-l_{k2})!} \cdot \frac{(n_{sa}-n_s-l_{k3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^j \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge D + l_s + s - n - l_i + 1 \leq D - n + 1 \wedge 2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge D \geq n < n \wedge l = \mathbb{k} > 1 \wedge j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^i, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge s \geq 6 \wedge s = \dots + \mathbb{k} \wedge \mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n+l_s \wedge l_s > D-n+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j_{sa} \leq j_i+j_{sa}-s \wedge j_{sa}+s-j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik}-j_{sa}^{ik}+1 = l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i+j_{sa}-s > l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

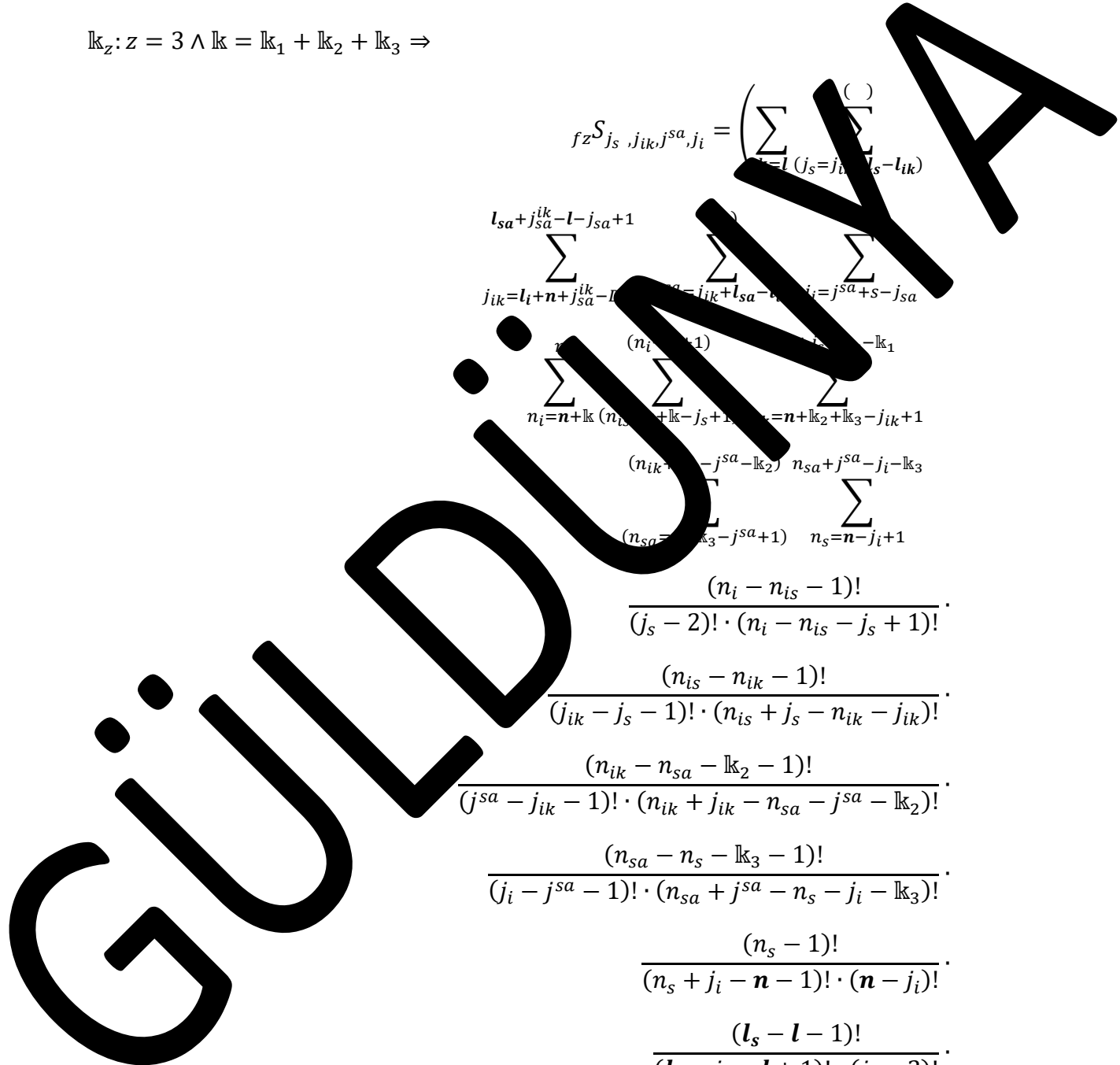
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{sa}-l_{ik}}^{()} \sum_{j_{ik}=l_i+n+j_{sa}-l}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{j_{sa}=j_{sa}-l}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}-1)} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}-1)} \sum_{n_s=n-j_i+1}^{(n_s-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{sa}+j_{sa}^{lk}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_1}+j^{sa}-j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j^{sa}-1)! \cdot (n_s=n-j_i+l_{k_3}-j^{sa}-1)!} \cdot \frac{(n_s-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-s-1}^{l_i+n+j_{sa}^{lk}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDÜZÜM

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!})$$

$D \geq n < n \wedge l_s = D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D > n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 6 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-n_{sa}-j_{sa}+j_i-k_3)}{(n_{sa}=n+k_3-j_{sa}+1) \cdot (n_s=n-j_i+1)}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < l_s \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

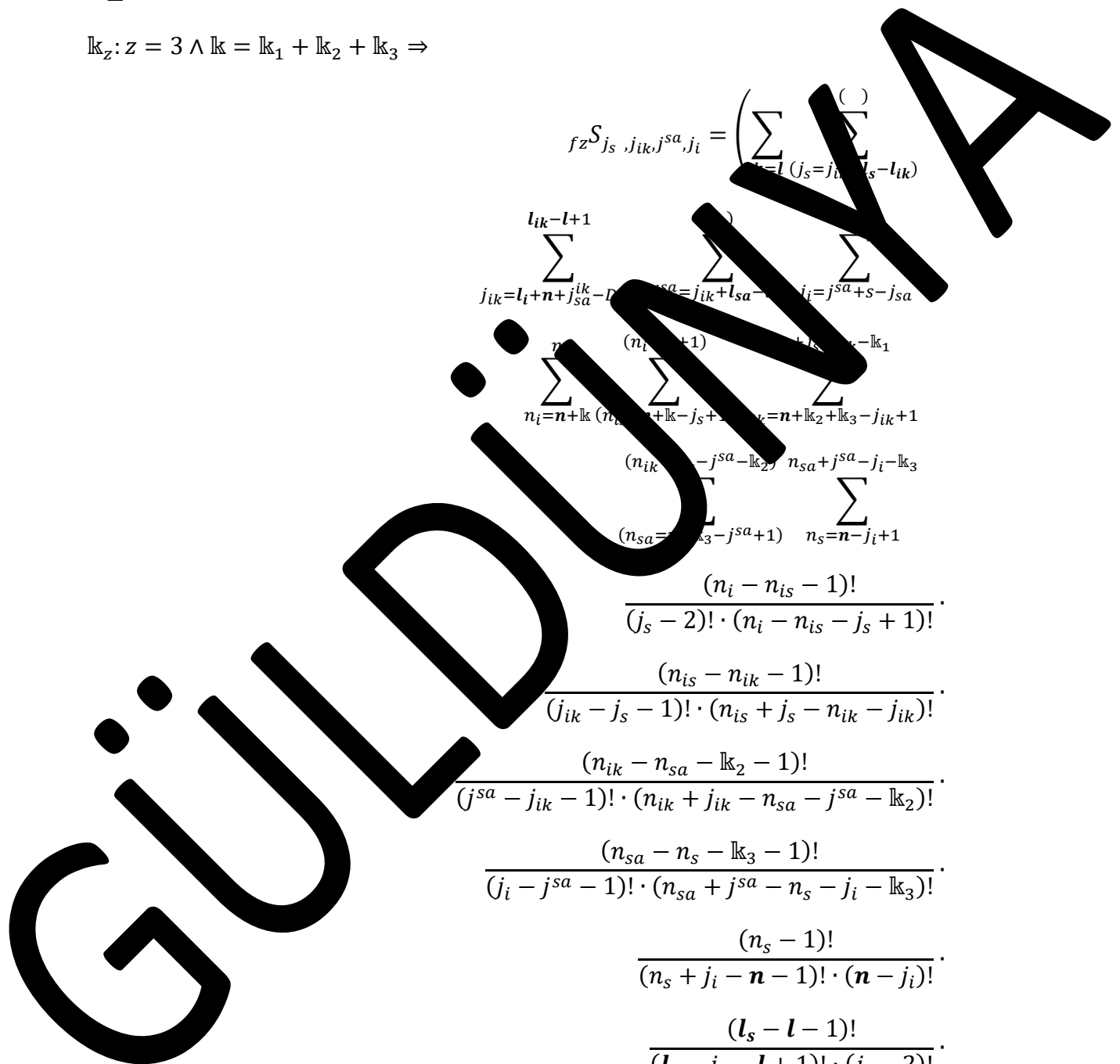
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 6 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{l_i} \sum_{j_s=j_{sa}-l_{ik}}^{(j_s=j_{sa}-l_{ik})} \sum_{j_{ik}=l_i+n+j_{sa}-D}^{l_{ik}-l+1} \sum_{j_{sa}=j_{ik}+l_{sa}-D}^{(j_{sa}=j_{ik}+l_{sa}-D)} \sum_{j_i=j_{sa}+s-j_{sa}}^{(j_i=j_{sa}+s-j_{sa})} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k}+1)} \sum_{n_{ik}=n+\mathbb{k}_1}^{(n_{ik}=n+\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_2}^{(n_{sa}=n+\mathbb{k}_2+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}^{ik}}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}-1)! \cdot (n_s=n-j_i-k_3)!} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa} \leq j^{sa} + j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + j_s = l_s \wedge l_s - j_{sa} - j_s = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$\{s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_{sa}+s-l-j_{sa}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-k_1-k_2+1)! \cdot (n_s=n-j_i-k_3)!}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+l_{sa}-l_{sa})}^{(\cdot)} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{j_s} \sum_{(j_s=j_{ik})}^{(l_{ik})} \sum_{(j_s=j_{sa})}^{(l_{sa})} \sum_{(j_s=j_i)}^{(l_i)}$$

$$\sum_{j_{sa}=j_{sa}^{ik}}^{(n)} \sum_{j_{ik}=j_{ik}-l_{sa}}^{(n_i-j_s+l_{sa})} \sum_{j_i=j_i+l_{sa}}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(j_s=s-D-1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+l_{sa})} \sum_{(n_{is}=n+l_{sa}+1)}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\sum_{n_s=n-j_i+1}^{(n_s-1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

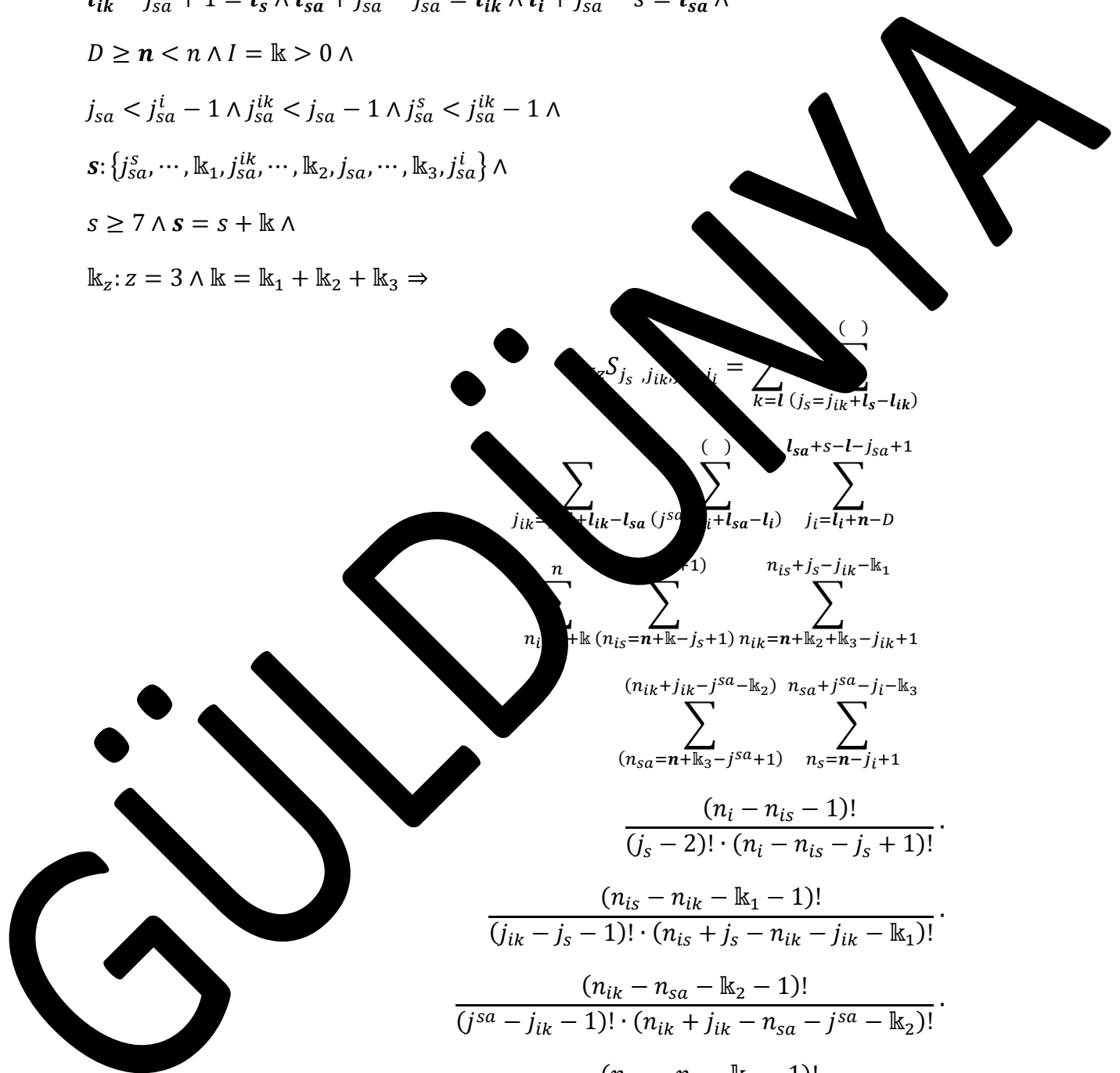
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_{sa}^i} &= \sum_{k=l}^{(\cdot)} (j_s = j_{ik} + l_s - l_{ik}) \\ &\sum_{j_{ik} = \dots + l_{ik} - l_{sa}}^{(\cdot)} (j^{sa}) \sum_{i+l_{sa}-l_i}^{(\cdot)} l_{sa} + s - l - j_{sa} + 1 \\ &\sum_{n_i = \dots + \mathbb{k}}^{(\cdot)} (n_i = n + \mathbb{k} - j_s + 1) \sum_{n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(\cdot)} n_{is} + j_s - j_{ik} - \mathbb{k}_1 \\ &\sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{(\cdot)} (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2) \sum_{n_s = n - j_i + 1}^{(\cdot)} n_{sa} + j^{sa} - j_i - \mathbb{k}_3 \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\}$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} S_{i,j} &= \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\ &= \sum_{j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\ &= \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &= \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \end{aligned}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - l}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - l_{sa} - s = l_i \wedge l_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 7 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbb{k} = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 1 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_s=n-j_i+1} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_s \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(\quad)}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-l}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{(n_{sa}+j^{sa}-j_i)}{n_s=n-j_i+1}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq \dots < n \wedge l_s > D \dots n+1$

$\dots \leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge \dots + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} = \dots - j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{ik}+n+s-D-j_{ik}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)} \frac{(n_i - n_{is} - 1)!}{(j_s - l)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - k - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=l}^{l_s+s-l} \binom{l_s+s-l}{k} \binom{l_s+s-l-k}{j_{ik}-j_s+l-k} \binom{l_s+s-l-k-j_{ik}+j_s-l}{D-j_{sa}^{ik}} \binom{l_s+s-l-k-j_{ik}+j_s-l}{n} \binom{n_i-j_s+1}{n_i+n+k} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{is}=n+k_1} \binom{n_{ik}-n_{sa}-k_2}{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{n_{sa}+j_{sa}^{ik}-k_2}{n_{sa}=n+k_3-j_{sa}+1} \binom{n_{sa}+j_{sa}^{ik}-j_i-k_3}{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_{sa}^i} &= \sum_{k=l}^{(\cdot)} (j_s = j_{ik} + l_s - l_{ik}) \\ &\sum_{j_{ik}=j_{sa}^{ik} - l_{ik} - l_{sa}}^{(\cdot)} \sum_{j_i=l_s + n + s - D - 1}^{l_i - l + 1} \\ &\sum_{n_i=j_{sa}^{ik} + \mathbb{k}}^{n} \sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{(1)} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &\sum_{(n_{sa}=n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s=n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

GÜLDÜNKYA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

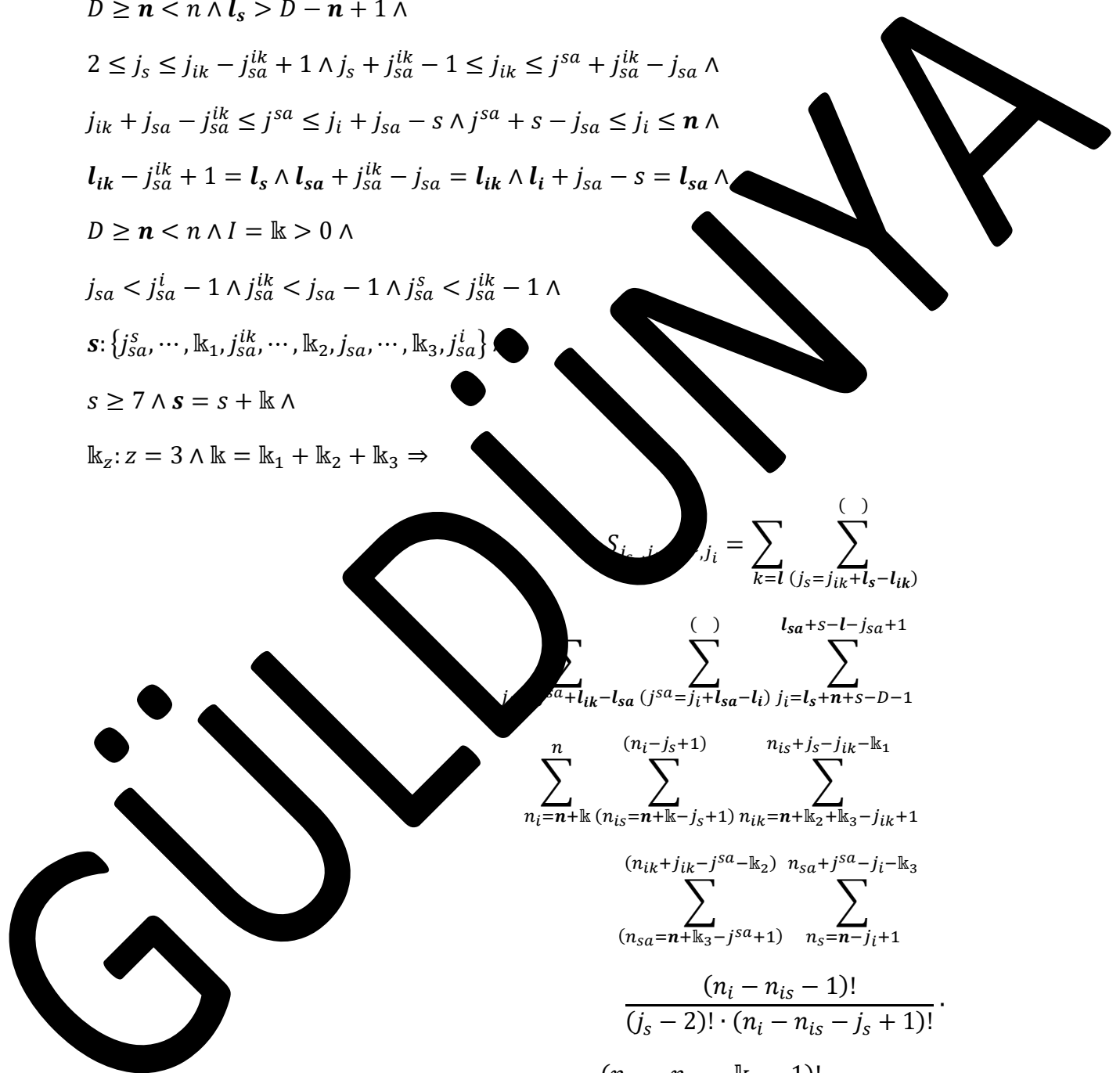
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\}$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i=j_s+l_{ik}} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_s+n+s-D-1} \sum_{n_i=n+k} \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$



$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + n + s - D - 1}^{l_{ik} + s - l - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!}$$

$$\frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - l_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{is}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa} \wedge$$

$$s \geq 7 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z: \dots = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 1 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_i+1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_i-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!} \cdot \frac{(n_{sa}-n_{is}-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-\mathbb{k}_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq 7 \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$Z \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_s}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{is}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{ik} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_{ik} - j_{sa} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s = \dots + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(l_{sa} - l + 1)} (j_{sa} = l_i + n_s - D - s) j_i = j_{sa} + \dots$$

$$\sum_{n_i = \dots}^n (n_i = n_s + j_s + 1) n_{ik} = j_{ik} + 1$$

$$\sum_{(n_{ik} + j_{ik} - \dots - \mathbb{k}_2)}^{(n_s + j_{sa} - j_i - \mathbb{k}_3)}$$

$$\sum_{(n_{sa} = \dots - j_{sa} + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

GÜLDENYA

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \dots$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(n_i=n_{is}+1)} \sum_{(n_i=n_{is}+1)} \sum_{(n_i=n_{is}+1)} \dots$$

$$\sum_{n_i=n_{is}+1}^n \sum_{(n_{is}=n+\mathbb{k}_3+1)} \sum_{(n_{is}=n+\mathbb{k}_3+1)} \sum_{(n_{is}=n+\mathbb{k}_3+1)} \dots$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)} \sum_{(n_s=n-j_i+1)} \sum_{(n_s=n-j_i+1)} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}-k-l_{sa}}^{(l_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - \dots)}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

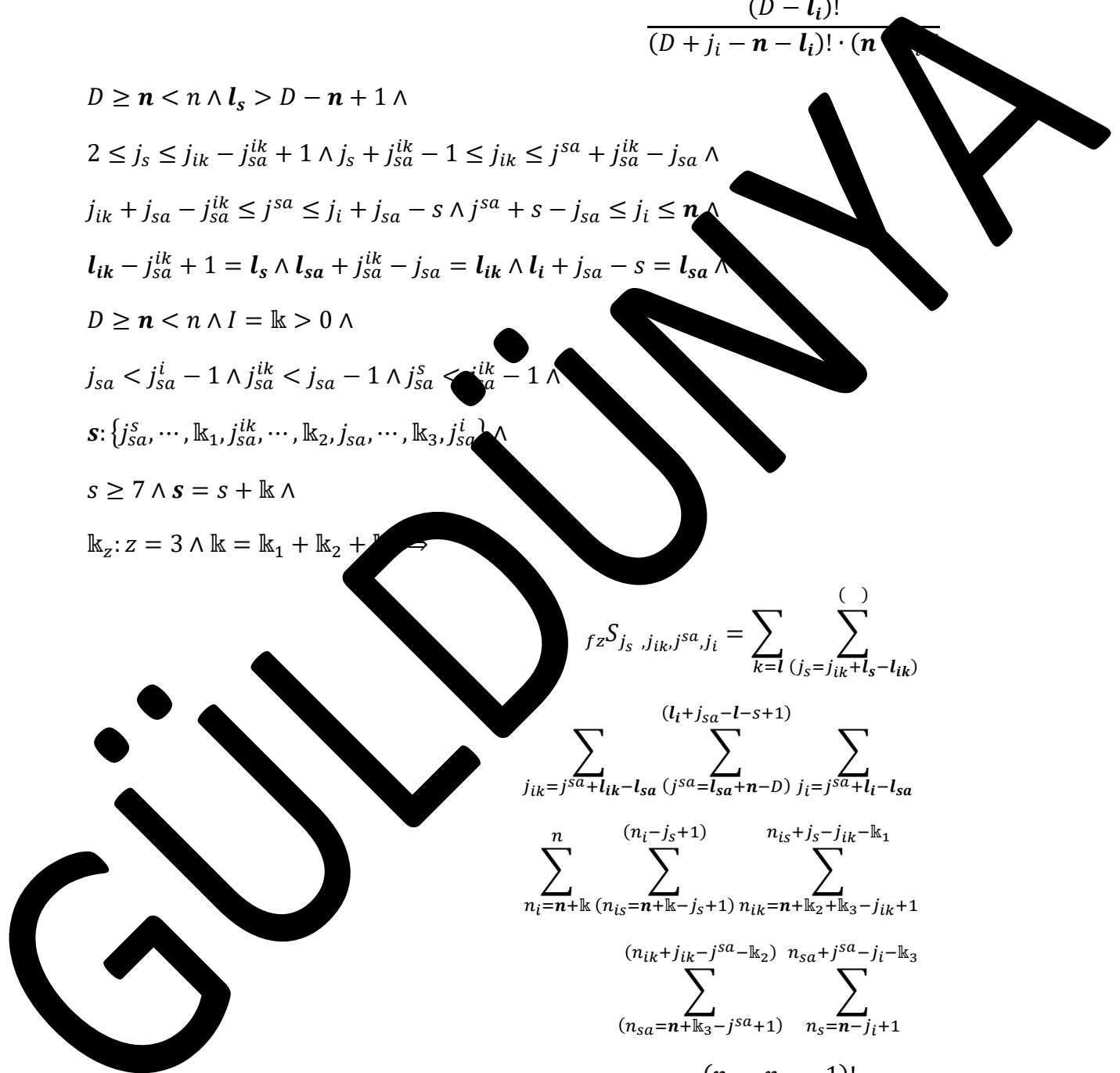
$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j_{sa} = l_{sa} + n - D)} \sum_{j_i = j_{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$



$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - j_{sa}^i \wedge j_{sa}^i < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_1: z = 3 \wedge \mathbb{k}_1 = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - j_{sa} - s \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s < j_{sa}^{ik} - j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^s\} \wedge$

$s \geq 7, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{is}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$

$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa}^{ik} = j_i \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$l_s \geq n - l_i \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{ik}^{ik})}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_{sa}-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}_1}^{(n_{is}+j_{ik}-\mathbb{k}_1)} \sum_{j_{ik}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{j^{sa}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}=n-j_i+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()} \sum_{j_{ik}=j_{sa}^i + l_{ik} - l_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j_{sa} = l_{ik} + n + j_{sa}^{ik} - j_{sa}^i)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_i=0}^n \sum_{(n_{is}=n_i + j_{sa}^i - 1)}^{(j_s + 1)} \sum_{(n_{ik}=n_i + j_{sa}^{ik} - j_{sa}^i)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa}=n_i + j_{sa} - j_{sa}^i - \mathbb{k}_2)}^{(j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_s=n_i + 1)}^{(j_s - j_{ik} - \mathbb{k}_1)} \frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^i=j_{sa}+l_{sa}-l_{sa}^{ik}} \sum_{j_{sa}^s=j_{sa}+l_{sa}^s-l_{sa}^{ik}} \sum_{j_{ik}^i=j_{ik}+l_{ik}-l_{sa}^{ik}} \sum_{j_{sa}^i=l_s+n_{is}-D-1} \sum_{j_i=j_{sa}^i+l_i-l_{sa}} \sum_{n_i=n_{is}+1}^{n_{is}+1} \sum_{n_{ik}=n_{ik_2}+k_3-j_{ik}+1}^{n_{is}+1} \sum_{n_{sa}^i=j_{sa}^i-k_2}^{n_{sa}+j_{sa}^i-j_i-k_3} \sum_{n_{sa}^s=n_{sa}+k_3-j_{sa}+1} \sum_{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

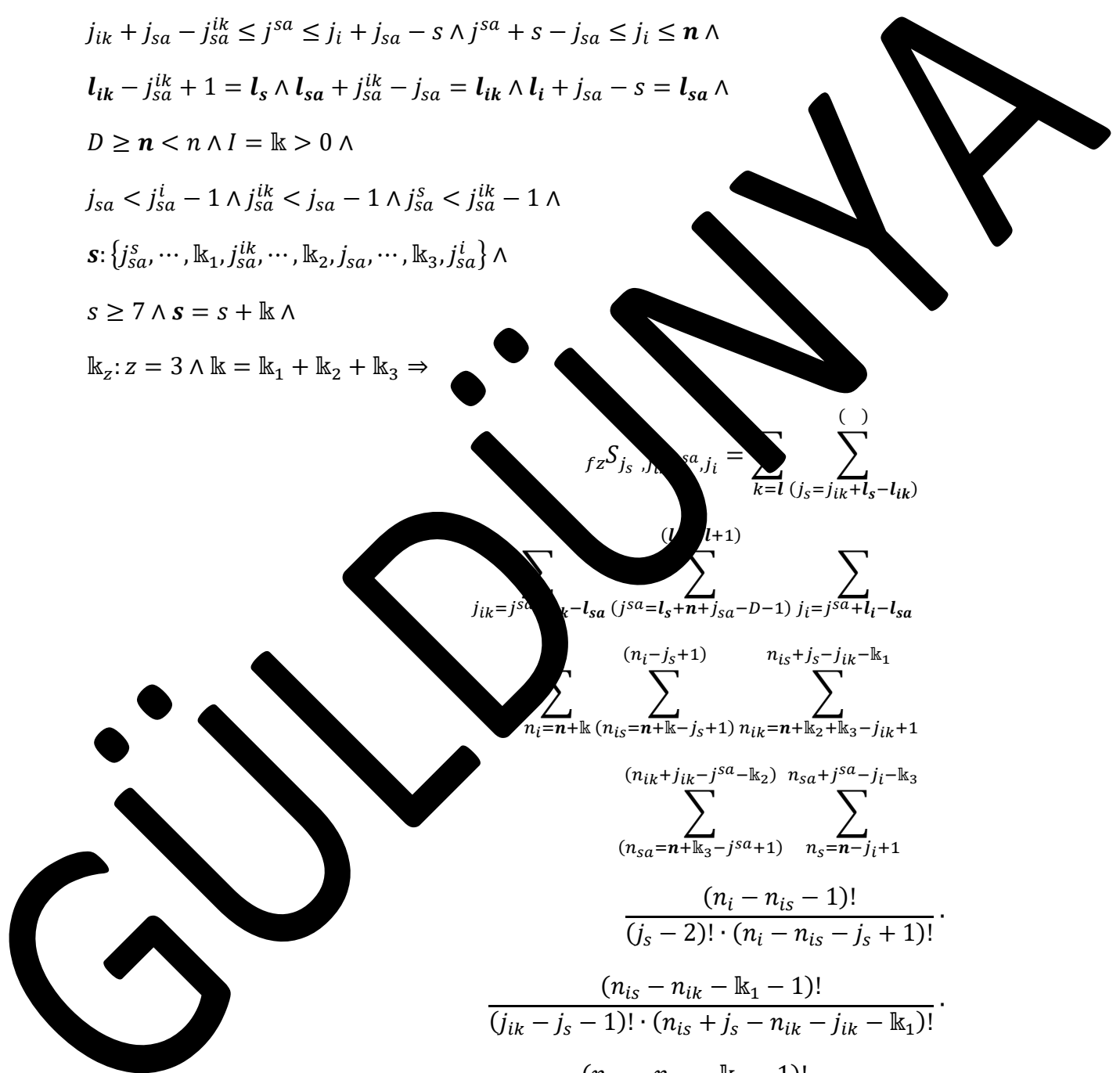
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}^{ik}, j_i} &= \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\ &\sum_{(j_{ik}=j^{sa}-k-l_{sa})}^{(l+1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{(j_i=j^{sa}+l_i-l_{sa})} \\ &\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_s + n + j_{sa} - D - 1)} \sum_{j_i = j_{sa}^{ik} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_i - 1)!}{(D + l_i - n - l_i - j_i - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - s$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - j_{sa}^i \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + 1 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + j^{sa} - n - 1)!}{(n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = D - n + 1 > 0 \wedge$$

$$j_s < j_{sa}^{ik} - j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, \mathbb{k}_3, j_{sa}^{ik}\} \wedge$$

$$s \geq 7, l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{n_s=n-j_i+1} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{sa} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_{s_3}-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq l_s \wedge n \wedge l_s > D \wedge n+1 \wedge$$

$$l_s \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$s \geq n \wedge I = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_s}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}+j_{ik}-n_{sa}-\mathbb{k}_1}^{n_{is}+j_{sa}-j_{ik}-\mathbb{k}_1} \sum_{j_{ik}+1}^{(\cdot)}$$

$$\sum_{(n_{ik}+j_{ik}-n_{sa}-\mathbb{k}_2)}^{(\cdot)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-n_{sa}-\mathbb{k}_3} \sum_{(j_i=n-j_i+1)}^{(\cdot)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{()} \sum_{(j_s - \mathbb{k}_k + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} (j_{sa}=j_{ik}-l_{ik}) j_i=j_{sa}^{ik}-j_{sa}$$

$$\sum_{n_i=0}^n (n_{is}=n-i+1) n_{ik}=j_{ik}+1$$

$$\frac{(n_{ik}+j_{ik}-n_{sa}-\mathbb{k}_2) n_{sa}+j_{sa}-j_i-\mathbb{k}_3}{(n_{sa}=n_{ik}-j_{sa}+1) n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

GÜLDENMYA

$$fz \sum_{j_s, j_{ik}, j^{sa}, j_i} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{(j^{sa} = j_{ik} - l_{ik})} \sum_{(j_i = j^{sa} + l_i - l_{sa})} \sum_{(j_{ik} = l_i + n + j_{sa}^{ik} - l_s)} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{(j^{sa} = j_{ik} - l_{ik})} \sum_{(j_i = j^{sa} + l_i - l_{sa})} \sum_{(n_i = n - j_s + 1)} \sum_{(n_{is} = n + k_1 - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)} \sum_{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)} \sum_{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=l_{sa}+n+l_{sa}-D-j_{sa}}^{\binom{()}{}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{\binom{()}{}} \sum_{j_i=j_{sa}^i+l_i-l_{sa}}^{\binom{()}{}}$$

$$\sum_{n_i=n+k}^{\binom{()}{}} \sum_{(n_{is}=n+k-j_s+1)}^{\binom{()}{}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{\binom{()}{}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{\binom{()}{}} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{\binom{()}{}} \sum_{n_s=n-j_i+1}^{\binom{()}{}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\)}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{k-l+1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i - l_i)!}{(D + l_i - n - l_i)! \cdot (l_i - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_s \leq j_i \leq j^{sa} + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - j_{sa}^i \wedge j_{sa}^i < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_i: z = 3 \wedge z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{l_s + j_{sa}^{ik} - l} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{()} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} - j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} - j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_s - j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = 0 \wedge$

$j_s < j_{sa}^{ik} - j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^s\} \wedge$

$s \geq 7, s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(n_s + j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3, \mathbb{k}_s = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_s \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_s \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{sa} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_s > n - n + 1 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{i_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j_{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{is}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq \langle n \wedge l_s \rangle D = n + 1 \wedge$$

$$l_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$n \geq n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j_i+1)}^{(n_{sa}+j^{sa}-n_s-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{sa})}^{(\cdot)} \sum_{i=j_{sa}^{ik}-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}^{(n_{ik}=n_{sa}+k_2-j_{ik}+1)} \sum_{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}^{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n_{sa}+k_2-j_{ik}+1)}^{(n_{ik}=n_{sa}+k_2-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=l}^{\dots} \sum_{(j_s=j_{ik})} \dots$$

$$\sum_{j_{ik}=s+n+l}^{l_{ik}-l+1} \sum_{(j_{ik}=l_{sa}+l)} \dots \sum_{i=s+l-i-l_{sa}}$$

$$\sum_{i=n+k}^n \sum_{(n_i=n+l)}^{(n_i-j_s+1)} \sum_{n_{is}=n+k}^{n_{is}+j_s-j_{ik}-k_1} \dots$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

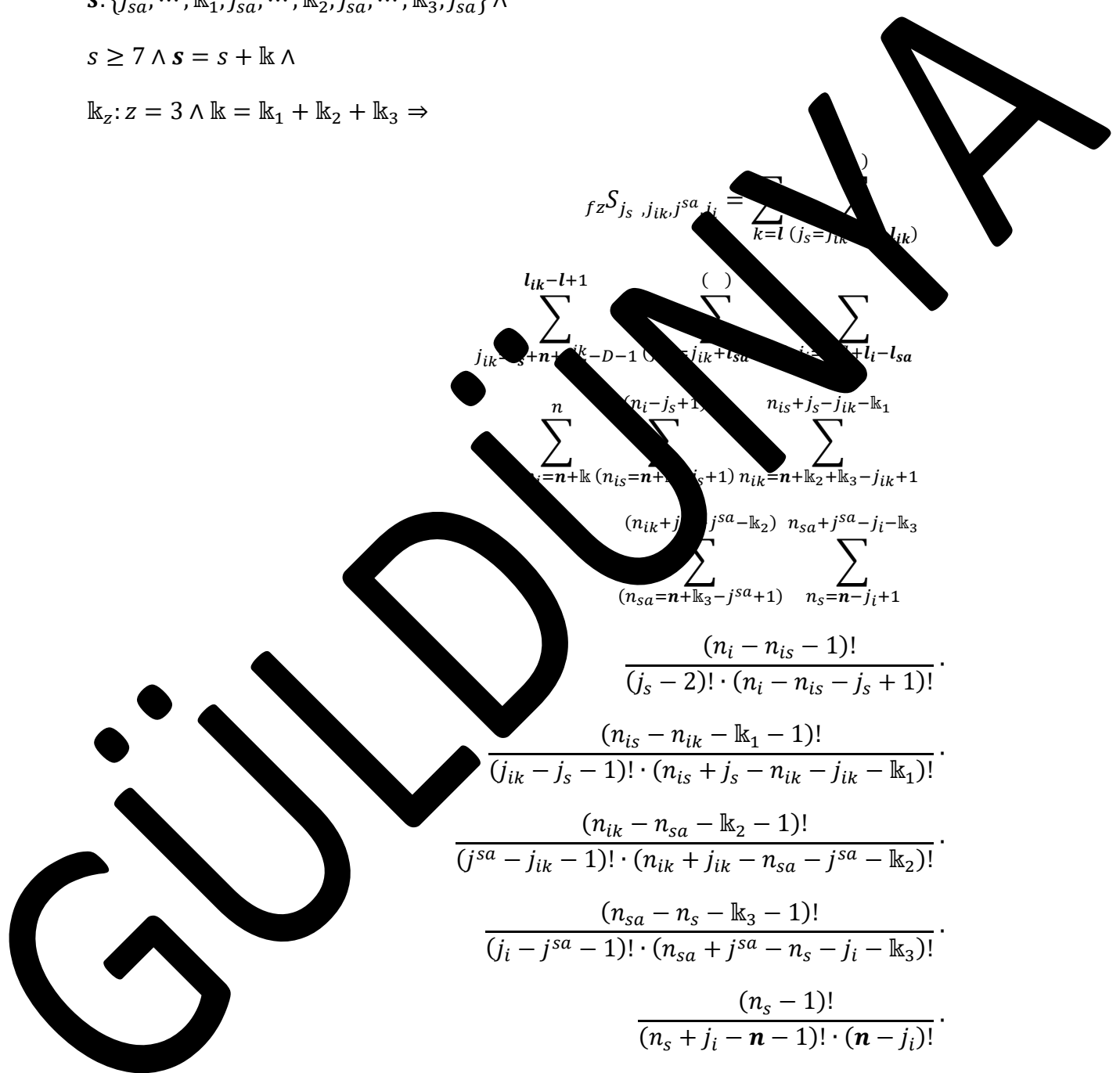
$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{l-s+2} \binom{l-s+2}{k} j_{ik}^{l-s+2-k} j_{sa}^{k-1} = \sum_{k=l}^{l-s+2} \binom{l-s+2}{k} j_{ik}^{l-s+2-k} j_{sa}^{k-1} \\ & \sum_{j_{ik}=l_{ik}-l_s}^{n-l_{ik}+1} \sum_{j_{sa}=l_{sa}-l_{ik}}^{n-l_{sa}+1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n-l_i+1} \sum_{n_i=n+l-k-j_s+1}^{n-l_{ik}+1} \sum_{n_{is}=n+l-k-j_s+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\}$

$s \geq 7 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$\sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-l-j_{sa}+2)}$$

$$\sum_{k=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

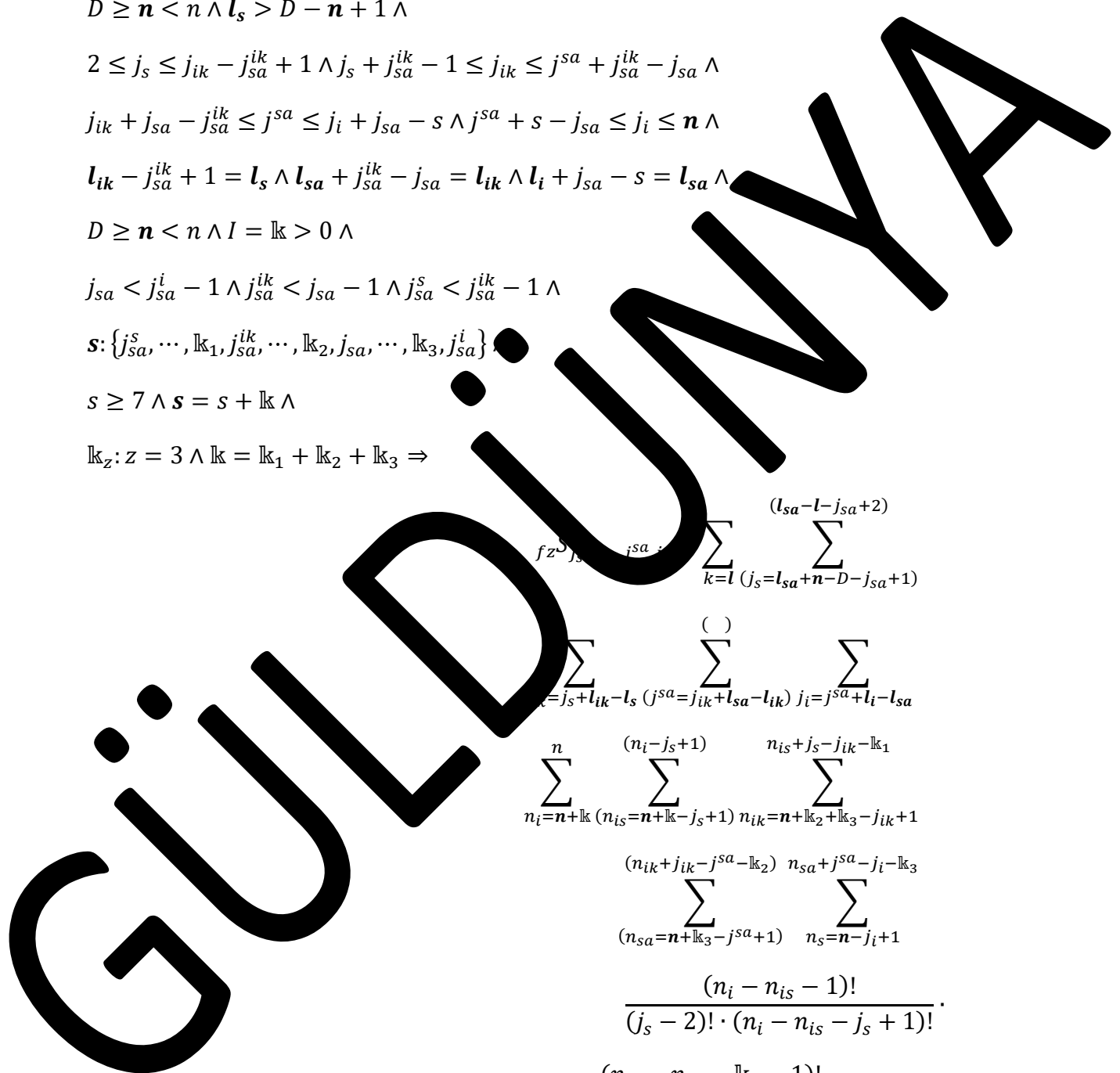
$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$



$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j^{sa}, \dots, j_i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$

$s: \{j_{sa}^{sa}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa} \wedge$

$s \geq 7 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > n < n \wedge l = l_s - 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \Rightarrow \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f^z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D > n + 1$

$j_s \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_s - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_s}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2-l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j^{sa}-j_i-l_{k_3})}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i}^{(n_s=n-j_i)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s < n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_i - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-l-s+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j_{sa}=j_{ik}+k_1)}^{()} \sum_{j_i=j_{sa}+k_2-k_3}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-n_{ik})}^{(n_{is}+j_s-n_{ik})}$$

$$\sum_{(n_{ik}-j_{sa}+1)}^{(n_{ik}-j_{sa}+1)} \sum_{(n_{sa}-j_i-k_3)}^{(n_{sa}-j_i-k_3)}$$

$$\sum_{(n_{sa}-n_s-k_3+1)}^{(n_{sa}-n_s-k_3+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - k_1 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

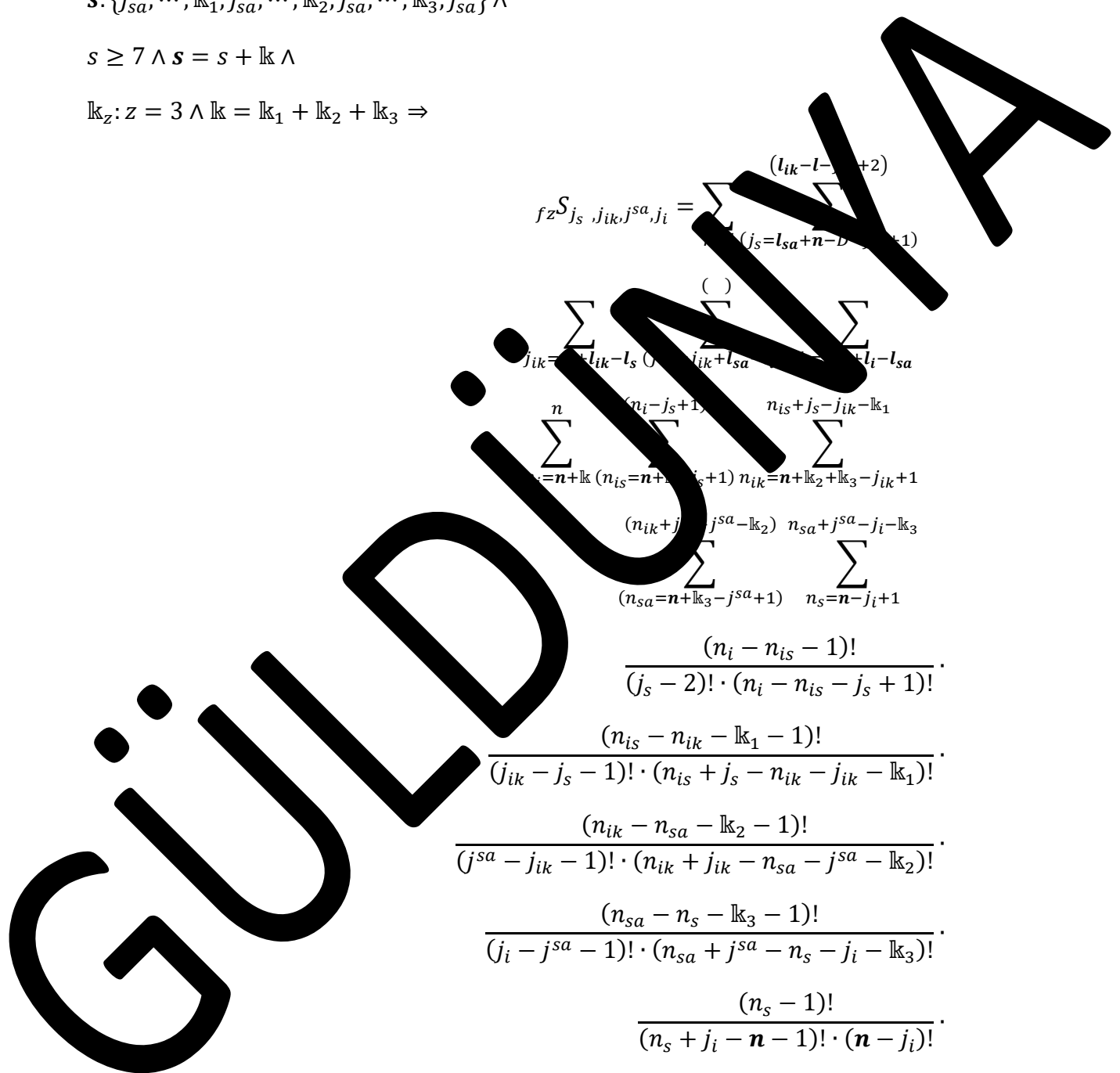
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \frac{(l_{ik} - l_s + 2)!}{(j_s = l_{sa} + n - D + 1)!} \cdot \sum_{j_{ik} = l_{ik} - l_s}^{(n_i - j_s + 1)} \sum_{j_{sa} = l_{sa} - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_i = n + k}^{(n_{ik} + j_{sa} - k_2)} \sum_{j_{sa} = n + k_3 - j_{sa} + 1}^{(n_{sa} + j_{sa} - j_i - k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

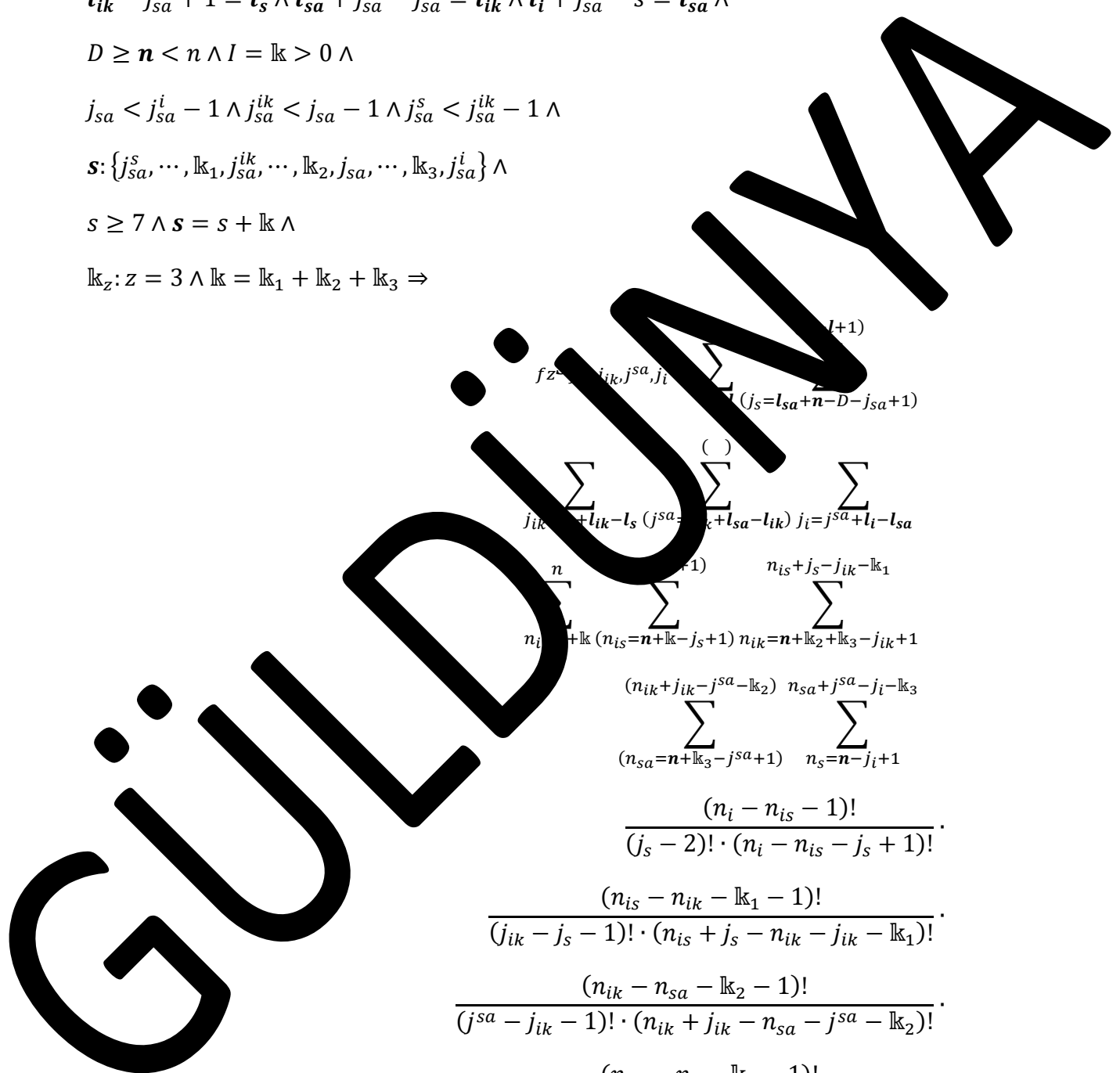
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz = \sum_{j_i=j_{sa}^{ik}}^{j_i=j_{sa}^{ik}+1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{j_s=l_{sa}+n-D-j_{sa}+1} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_s}^{j_{ik}=j_{sa}^{ik}+l_{ik}-l_s} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}}^{j_i=j_{sa}^{ik}+l_i-l_{sa}} \sum_{n_i=j_{sa}^{ik}+k}^{n_i=j_{sa}^{ik}+k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n_{sa}=n+k_3-j_{sa}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\}$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=1}^{(l_i - l - s + 2)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_i - l - s + 2)}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \frac{(n - l_i)!}{(n - j_i - n + l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{sa}, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^{sa}\} \wedge$$

$$s \geq 7 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z: \dots = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2 - 1)!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s - j_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D > n < n \wedge l = l_s - 0 \wedge$

$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 1 \wedge s \leq s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_i-l-s+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\ \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_s \leq j_{ik} - j_{ik} + 1 \wedge n_s + j^{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} < j_i + j_{sa} - j_s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > n - n + 1 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{sa}-l-j_{sa}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^{n} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$D \geq \dots < n \wedge l_s > D \dots n + 1$

$\dots \leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge \dots + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \dots - j_{sa}^{ik} = \dots - j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < \dots \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$l_{k_z}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i-1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - n_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > l - n + 1 \wedge$$

$$2 \leq l \leq D \wedge l_s + s - n - l_i \wedge$$

$$j_i - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(\cdot)} (j_{sa}=j_{ik}-s) \quad j_i=l_i+l_{ik}$$

$$\sum_{n_i=0}^n (n_{is}=n_{ik}+1) n_{ik} \quad j_s=j_{ik}-\mathbb{k}_1$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-\mathbb{k}_2)}^{(\cdot)} n_{sa}+j_{sa}-j_i-\mathbb{k}_3$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-\mathbb{k}_3-j_{sa}+1)}^{(\cdot)} \sum_{n_s=n-j_i+1}^{(\cdot)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

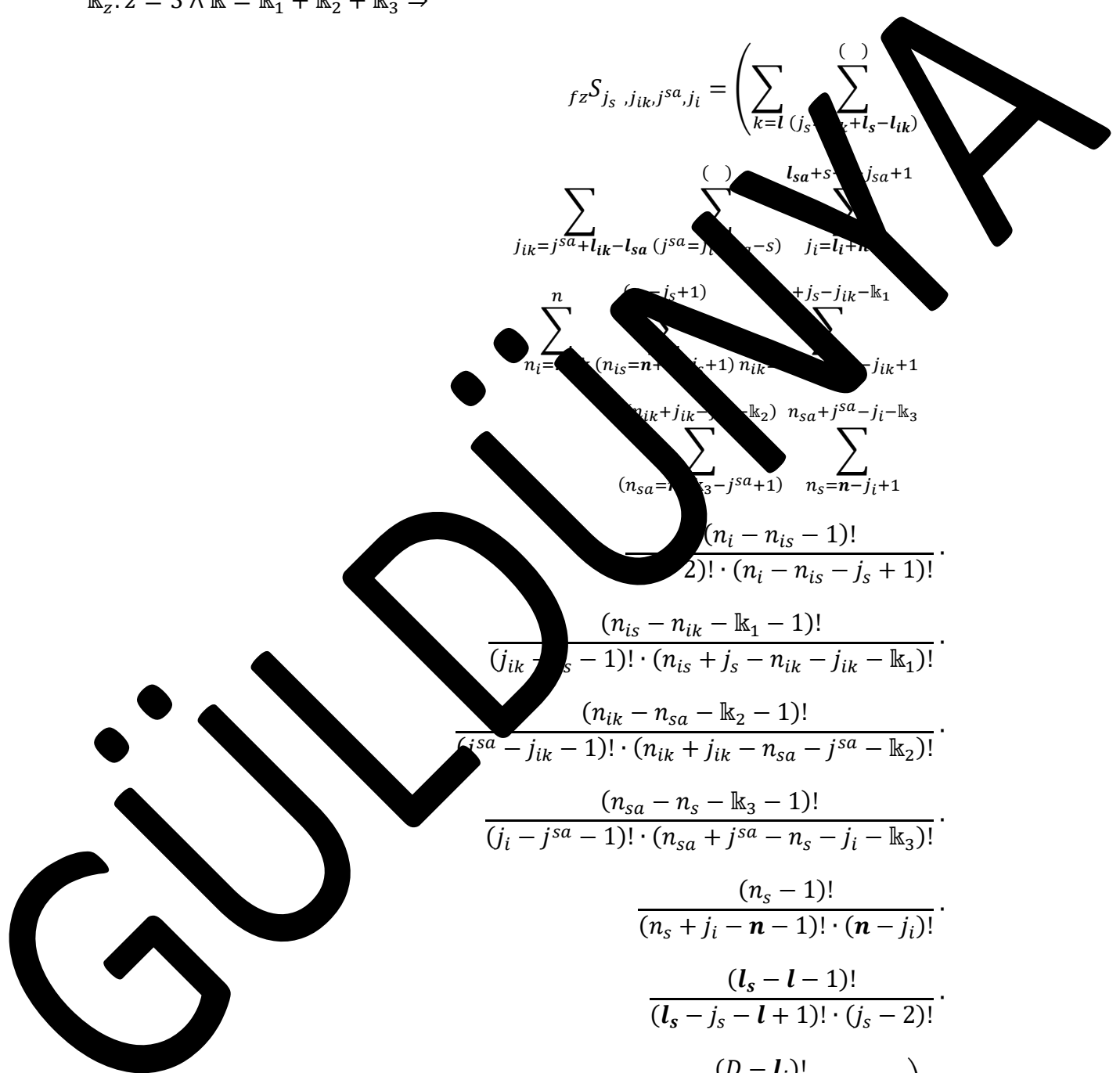
$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s-1)}^{l_{sa}+s-l-j_{sa}+1} \sum_{j_i=l_i+n-D} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_{sa}-l+1)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{l_i-l+1} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_{sa}+s-l-j_{sa}+2} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

GÜLDÜZ

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - 1)!}{(j^{sa} + l_i - j_s - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$D + l_s + s - n - l_i + 1 \leq D - n + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = j_s + \mathbb{k} \wedge$

$l = \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-l+1)}^{l_i-l+1} \sum_{j_i=l_i+n-D} \\
& \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
& \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
& \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_{sa} > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_i + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

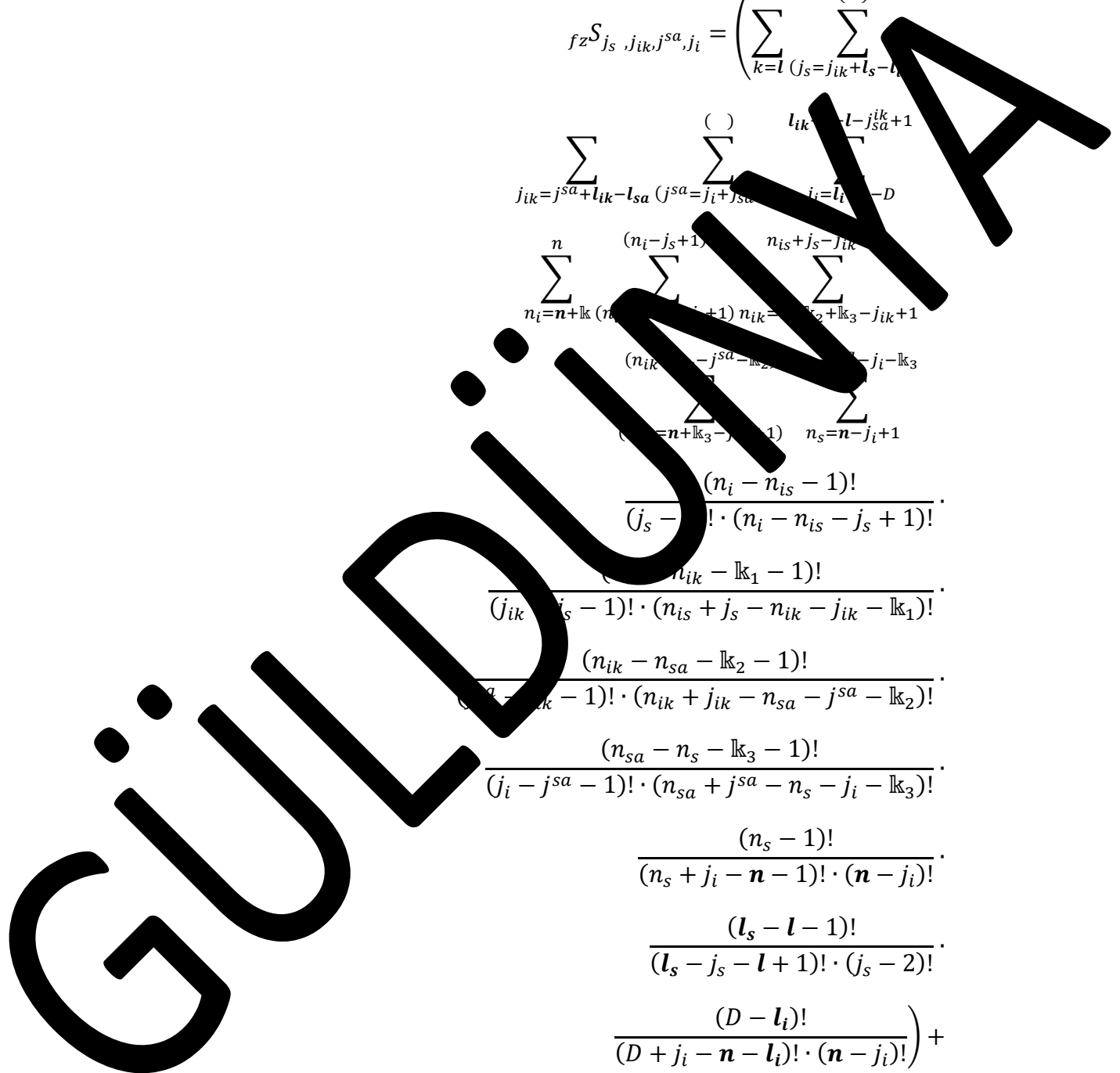
$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l} \sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}} \binom{()}{l_{ik}-l-j_{sa}+1} \sum_{j_{sa}=j_i+j_{sa}} \binom{()}{l_{ik}-l-j_{sa}+1} \sum_{i=l_i} \binom{()}{l_{ik}-l-j_{sa}+1} \sum_{n_i=n+k} \binom{()}{n_i-j_s+1} \sum_{n_{is}=j_s-j_{ik}} \binom{()}{n_{is}+j_s-j_{ik}} \sum_{n_{ik}=k_2+k_3-j_{ik}+1} \binom{()}{n_{ik}-j_{sa}-k_2} \sum_{n_{ik}=n+k_3-j_{ik}+1} \binom{()}{n_{ik}-j_{sa}-k_2} \sum_{n_s=n-j_i+1} \binom{()}{n_s-n+k_3-1} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - k_1 - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) + \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{l} \right)$$



$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^s \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - 1)!}{(j^{sa} + l_i - j_s - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D - j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$D + l_s + s - n - l_i + 1 \leq D - n + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_s - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^i, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = j_s + \mathbb{k} \wedge$

$\mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{l_i=l_i+n-D}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{l_i=l_i+1}^{l_i-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_1}} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_i-j_{ik}-l_{k_1})!} \\
& \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-l_{k_3})!} \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i \geq D - l_i + 1 \wedge$$

$$2 \leq l_i \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

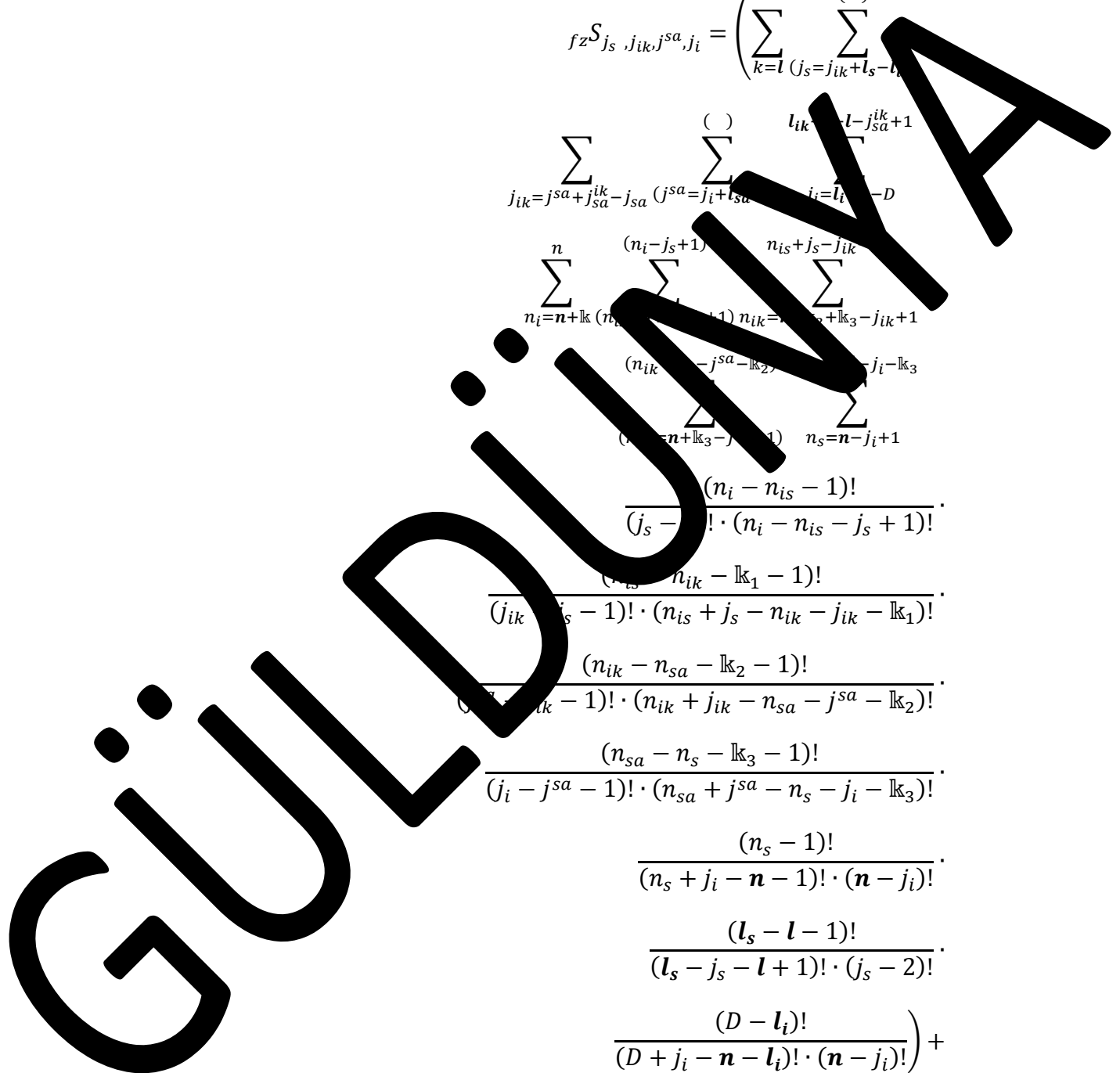
$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+l_{sa})}^{(\cdot)} \sum_{(i=l_i)}^{(\cdot)} \sum_{(l_{ik}=l-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{(n_i=n+k)}^{(\cdot)} \sum_{(n_i-j_s+1)}^{(\cdot)} \sum_{(n_{is}+j_s-j_{ik})}^{(\cdot)} \sum_{(n_{ik}=n_{sa}+k_3-j_{ik}+1)}^{(\cdot)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(\cdot)} \sum_{(j_i-k_3)}^{(\cdot)} \sum_{(n_s=n+k_3-j_i+1)}^{(\cdot)} \sum_{(n_s=n-j_i+1)}^{(\cdot)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{()}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{is}-l_{k_2}-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \binom{()}{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{()}{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + n - 1)!}{(n_s + n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l_i \wedge D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq l_i < n \wedge l = \mathbb{k} > 1 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \binom{()}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_i-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i \geq D - l + 1 \wedge$$

$$2 \leq l \leq l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

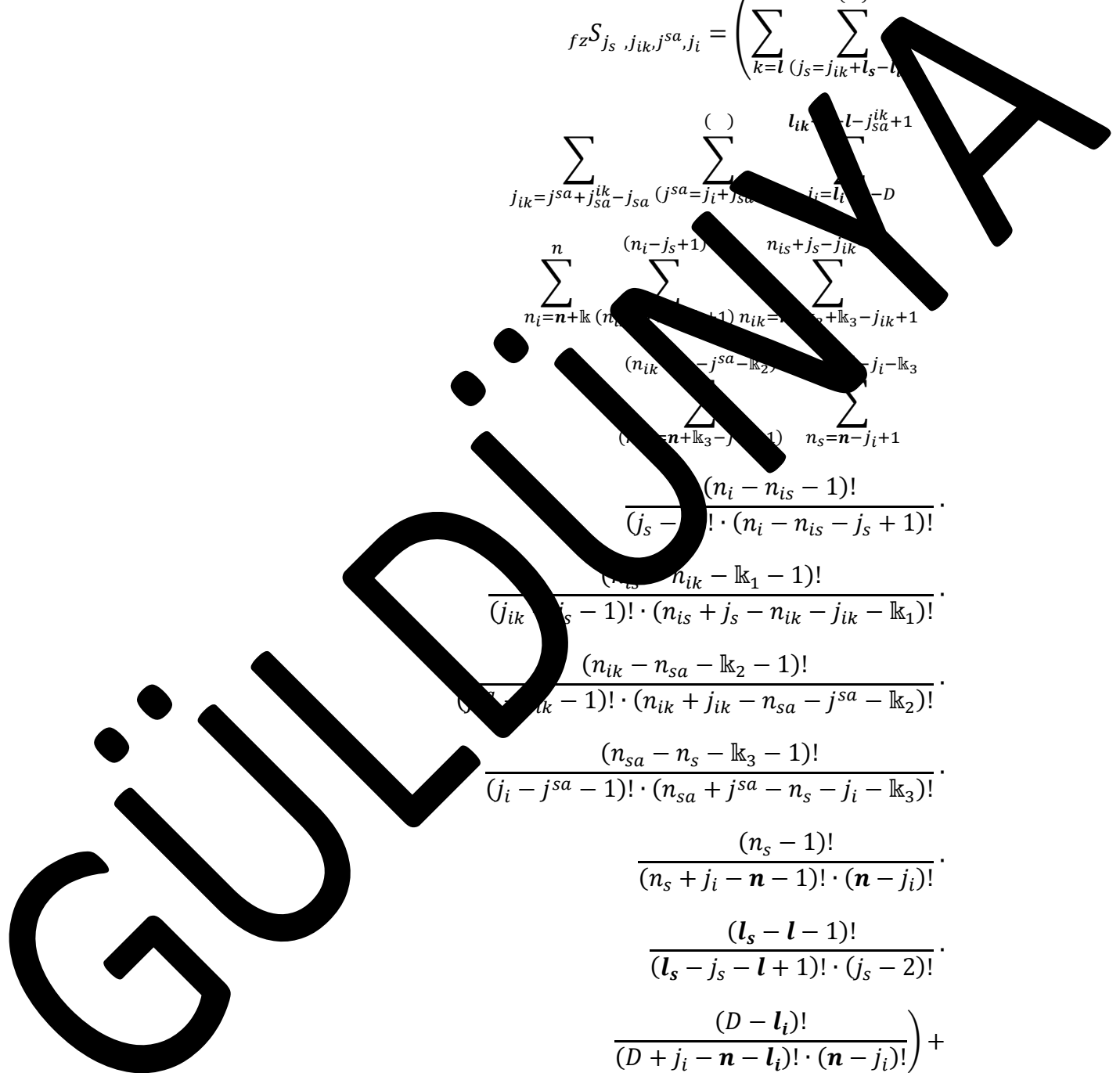
$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+j_{sa}^{ik}-j_{sa})}^{(\cdot)} \sum_{(i=l_i+l_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{(n_i=n+l_k)}^{(\cdot)} \sum_{(n_i-j_s+1)}^{(\cdot)} \sum_{(n_{is}+j_s-j_{ik})}^{(\cdot)} \sum_{(n_{ik}=n_{sa}+k_3-j_{ik}+1)}^{(\cdot)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(\cdot)} \sum_{(j_i-k_3)}^{(\cdot)} \sum_{(n_s=n-j_i+1)}^{(\cdot)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s-1)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-l-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_k+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{is}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - l_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{j^{sa}+j_{sa}^{lk}-j_{sa}-1} \sum_{j_{ik}=l_{ik}+n-D}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{l_{ik}+s-l-j_{sa}^{lk}+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})!}$$

$$\frac{(l_i - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + l_i - s \wedge j^{sa} + s - j_i \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^s - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}, \dots, \mathbb{k}_3, j_{sa}^s, \dots, \mathbb{k}_4\} \wedge$$

$$s \geq 1, s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3, \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s = D - n - 1 \wedge$

$2 \leq l_s \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} = j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$2 \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+j^{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-k_3)!}{(n_{sa}=n+k_3-j^{sa}+1)! \cdot (n_s=n-j_i-k_3)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \Bigg) +$$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right.$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j^{sa}-s-1)} \sum_{(j^{sa}=l_s+n+j^{sa}-D-1)}^{l_s+s-l} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-l)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})}^{l_i-l+1} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=l_s+s-l+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots, j_i\} \wedge$$

$$s > 7 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \dots + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{n} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3 - 1)!} \cdot \frac{(n_s + j_i - n - 1)!}{(j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - j_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq l \leq D + l_s + s - n - 1$

$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ls} - 1 \leq j_{ik} \leq j_s^a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j_s^a - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_s^a - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^a, \mathbb{k}_1, j_{sa}^i, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = \mathbb{k} + \mathbb{k} \wedge$

$\mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fzS_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\left(\sum_{k=l} \binom{()}{j_s=j_{ik}+l_s-l_{ik}} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \binom{()}{j^{sa}=j_i+l_{sa}-l_i} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDÜZ

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = n + l_s - l_{ik})}^{()} \sum_{j_{ik} = n + j_{sa}^{ik} - D - 1}^{l_s + l - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + s - l + 1}^{l_i - l + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLÜMWA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{sa} \leq j_i - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)! \cdot (j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$
 $2 \leq l \leq D + l_s + s - n - l_i$
 $2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$
 $l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
 $D \geq n < n \wedge I = \mathbb{k} > n \wedge$
 $j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$
 $s \geq 7 \wedge s = \dots + \mathbb{k} \wedge$
 $\dots \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}=n+k_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i}{n_s-n-j_i+1} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1) \cdot (j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)} \right)
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-k_2)}{(n_{sa}=n+k_3-j^{sa}+1)} \frac{n_{sa}+j^{sa}-j_i-k_3}{n_s=n-j_i+1}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)!} \cdot \frac{(n - l - 1)!}{(n - l - 1)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)!} \cdot (j_s - 2)! \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{(l_s)} \sum_{j^{sa}+l_{ik}-l_{sa}}^{(j_s)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j_s)} \sum_{j_i=l_s+s-l+1}^{(j_s)} \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} - 1 < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^{ik}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_s - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + \dots$$

$$2 \leq l \leq D + l_s + s - n - \dots$$

$$2 \leq j_s \leq j_{ik} - j_s^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_s^{ik} \leq j^{sa} - j_i + j_{sa} - s \wedge j_s - s - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 = \dots \wedge l_{sa} + j_{sa} - j_s \leq l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge D \geq \dots \wedge I = \mathbb{k} > \dots \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge s \geq 7 \wedge s = \dots + \mathbb{k} \wedge \dots \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \binom{()}{j_i+j_{sa}-s} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\left(\sum_{k=l}^{()}{\sum_{(j_s=j_{ik}+l_s-l_{ik})}} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \binom{()}{j_i+j_{sa}-s-1} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

GÜLDÜZ

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - l - 1)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^n \sum_{(j_s=j_{ik}+l_s-l)}^{j_s^{ik}-l} \sum_{(l_{sa}=l+1)}^{l_{sa}-l+1} \sum_{(j_i=l_s+s-l+1)}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l)!}{(n - l)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{\binom{j_s = j_{ik} + l_{sa} - 1}{j_{ik} = l_s + n + j_{sa}^{ik} - 1} \binom{j^{sa} = j_{sa}^{ik} - j_{sa} - 1}{j_i = l_i + n - D}} \sum_{\binom{j_s = l}{j_i = l_i + n - D}} \sum_{\binom{j_s = l}{j_i = l_i + n - D}}$$

$$\sum_{\binom{n_i - j_s}{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}} \sum_{\binom{n_{is} + j_s - j_{ik} - \mathbb{k}_1}{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}}$$

$$\sum_{\binom{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}} \sum_{\binom{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}{n_s = n - j_i + 1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

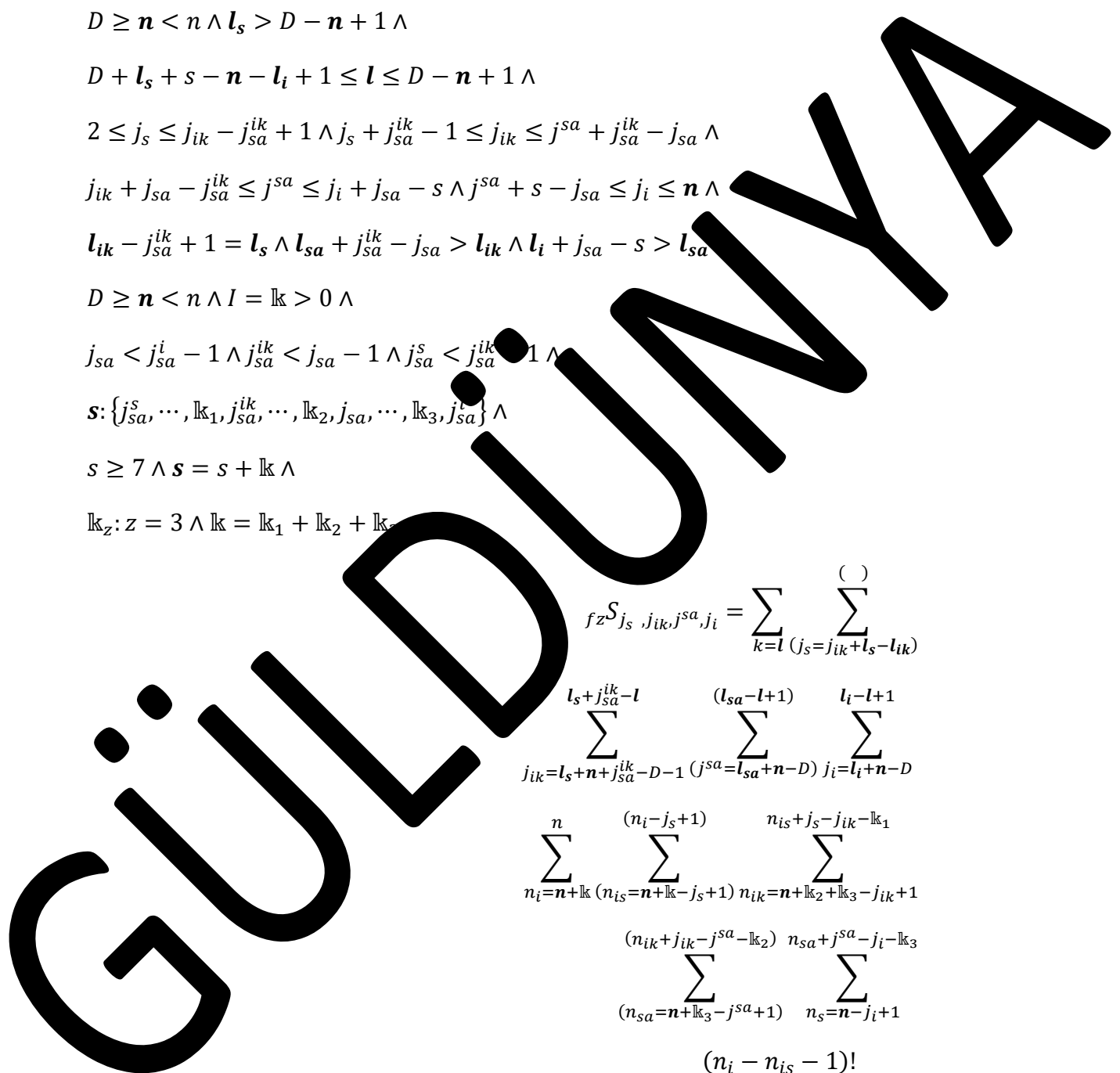
$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - l + 1)} \sum_{j_i = l_i + n - D}^{l_i - l + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$



$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - j^{sa} - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i - j_{sa} - 1 \leq j_{sa}^{ik} - 1 \wedge$$

$$s; \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_s+s-l} \right)$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot$$

$$\frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_s - l_{k_3})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_{i_s} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=l_s+n-D)}^{l_s+s-l} \right)$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(j_i+j_{s_a}-s-1)} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{l_s+s-l} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j^{sa} - 1)! \cdot (j_{ik} - j^{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{(j_s=l_s+n-D)}^{l_s} \sum_{j^{sa}+l_{ik}-l_{sa}}^{l_{sa}-l+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_s+s-l+1} \\
 & \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}
 \end{aligned}$$

GÜLÜM

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_{sa} = j_{ik} - j_s + 1)}^{(j_{ik} - j_{sa}^{ik})} \sum_{(l_s + s - l)}^{(j_{ik} - j_{sa}^{ik})}$$

$$\sum_{(n_i = n + k)}^n \sum_{(n_{is} = n + k_1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS} j_s, j_i, j_{sa}, j_i &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{k=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-l+1} \sum_{j_i=l_i+n-D} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i)!}{(D + l_i - n - l_i)! \cdot (j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_i \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_i\} \wedge$$

$$s \geq 7 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^k+1)} \right) \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-l} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i - 1)! \cdot (n - j_i)!} +$$

$$\sum_{l_s=0}^{(l_s-1)} \sum_{j_s=0}^{(n-D)-j_s} \sum_{l_{ik}=0}^{l_{ik}-l+1} \sum_{j_{ik}=0}^{l_{ik}+n-D-j_s-l_{ik}} \sum_{j_i=0}^{(j_i-1)} \sum_{j_i=l_s+l_s-1+1}^{l_i-l+1}$$

$$\sum_{n_{is}=0}^{n_{is}+l_{ik}-j_s+1} \sum_{n_{ik}=0}^{(n_{is}-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GUIDANCE

$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_s - l_i)} \sum_{j_i = l_i + n - j_s} \\
 & \sum_{n_i = n + k_1}^n \sum_{n_{is} = n + k_2 - j_{ik} - k_1}^{j_s} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n - j_{sa} - j_{sa}^{ik} - j_i - k_3)}^{(n_{sa} = n - j_{sa} - j_{sa}^{ik} - j_i - k_3)} \sum_{n_s = n - j_i + 1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} f_{zS} j_s, j_i, j_{sa}, j_i &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\ &\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \\ &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(D - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \cdot 7 \wedge s = \dots \wedge \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}} \sum_{(l_{sa} - l + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j_{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_{is} - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left(\frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\substack{(\cdot) \\ (j_s=j_{ik}+l_s-l_{ik})}} \right) \\
 & \sum_{i=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - 1)!}$$

$$\frac{(n - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j^{sa}+l_{ik}}^{\binom{()}{n+j_{sa}-l_{ik}}} \sum_{(j^{sa}=l_s, n-D)}^{\binom{()}{n-D}} \sum_{j_i=l_i+n-D}^{\binom{()}{l+1}}$$

$$\sum_{n_i=n+1}^{\binom{()}{n}} \sum_{n_{is}=n+l_s+1}^{\binom{()}{n_i-j_s}} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{\binom{()}{n_{is}+j_s-j_{ik}-l_{k_1}}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{\binom{()}{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}} \sum_{n_s=n-j_i+1}^{\binom{()}{n_{sa}+j^{sa}-j_i-l_{k_3}}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

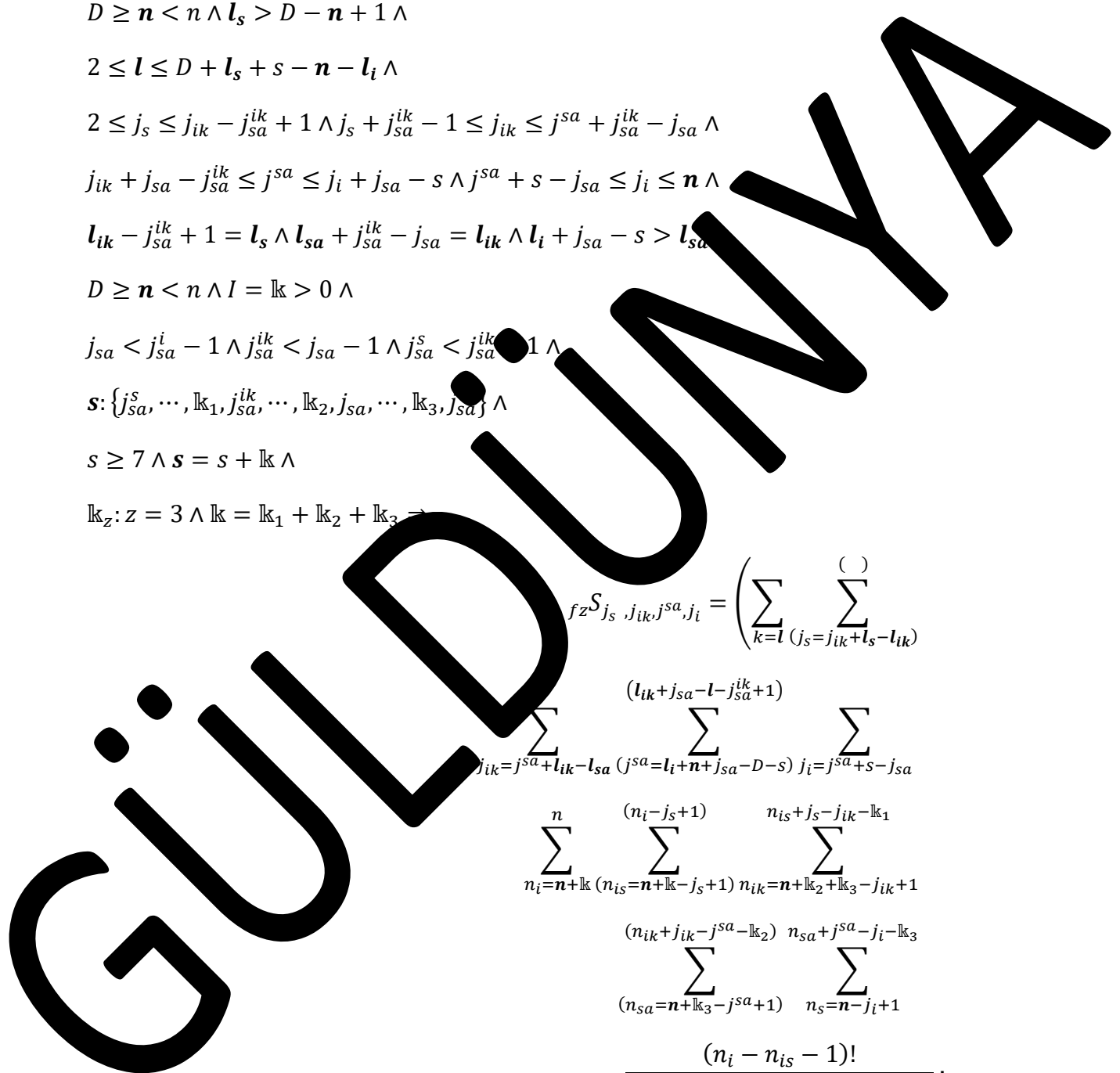
$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$



$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} +$$

$$\sum_{j_{ik}=j} \sum_{l_{ik}=l_{sa}} \sum_{(j^{sa}=l_i+l_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}+1} \sum_{l_i=l+1} \sum_{(j_s+l_{sa}-l_{ik})}$$

$$\sum_{n+l_{ik}} \sum_{(n_{is}=n+l_{ik}-j_s+1)} \sum_{n_{ik}=n+l_{ik_2}+l_{ik_3}-j_{ik}+1} \sum_{(n_i-j_s)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}+j^{sa}-j_i-l_{k_3}} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{l_i=l_i+n-} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+k-k_1}^{n_{is}+j_{sa}-k-k_1} \sum_{j_{ik}+1} \\
 & \sum_{(n_{ik}+j_{ik}-k_2)}^{(n_{ik}+j_{ik}-k_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-k_3} \sum_{=n-j_i+1} \\
 & \frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{k=l}^{\dots} \dots \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{\dots} \sum_{(j_{sa}=\dots+j_{sa}^i)}^{\dots} \sum_{l_i=l_{sa}}^{\dots}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(i-j_s+1)} \sum_{n_{ik}=n+l_k+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+l_k-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right)^+$$

$$\left(\sum_{k=l}^{(\cdot)} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_{ik}=j_{ik}+1}^{(\cdot)}$$

$$\sum_{(n_{sa}=n+k_3-j_s+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

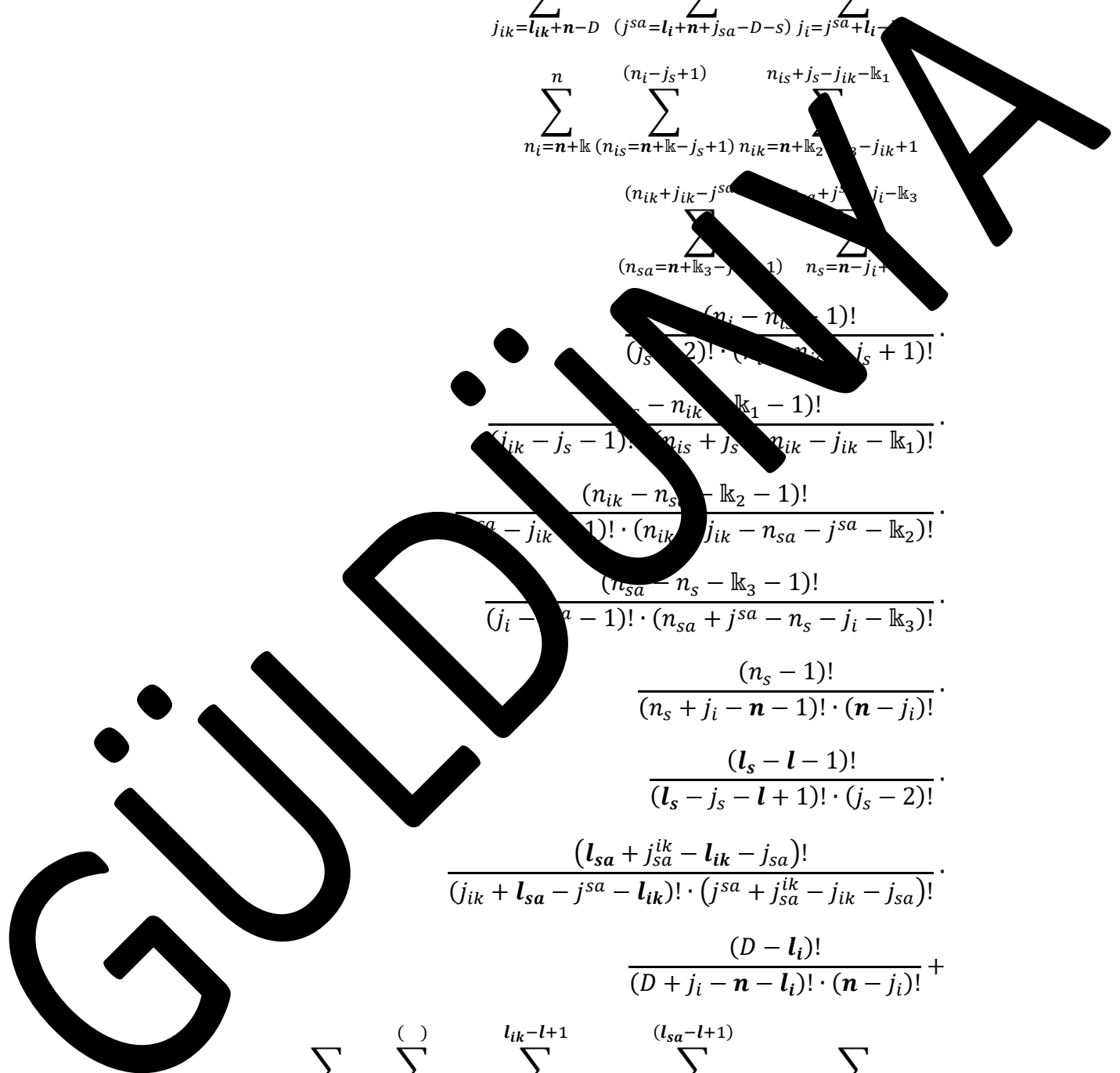
$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\cdot)} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$



$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - l - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - l_i + 1 \leq l \leq D - \mathbf{n} + l \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s \wedge l_s - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_i - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{lk}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^l\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{sa}-l_{ik}}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{n+j_{sa}-D}^{(n+j_{sa}-D)} \sum_{i=j_{sa}+s-j_{sa}}^{(n+j_{sa}-D)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-1)} \sum_{(n_{is}+j_s-1)}^{(n_{is}+j_s-1)-\mathbb{k}_1} \sum_{n=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\sum_{(n_{sa}-\mathbb{k}_3-j_{sa}+1)}^{(n_{sa}-\mathbb{k}_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜZYA

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!}{(j_s-k_2)! \cdot (n_{is}-n_{ik}-1)!} \cdot \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{ik}-j_s-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_s-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

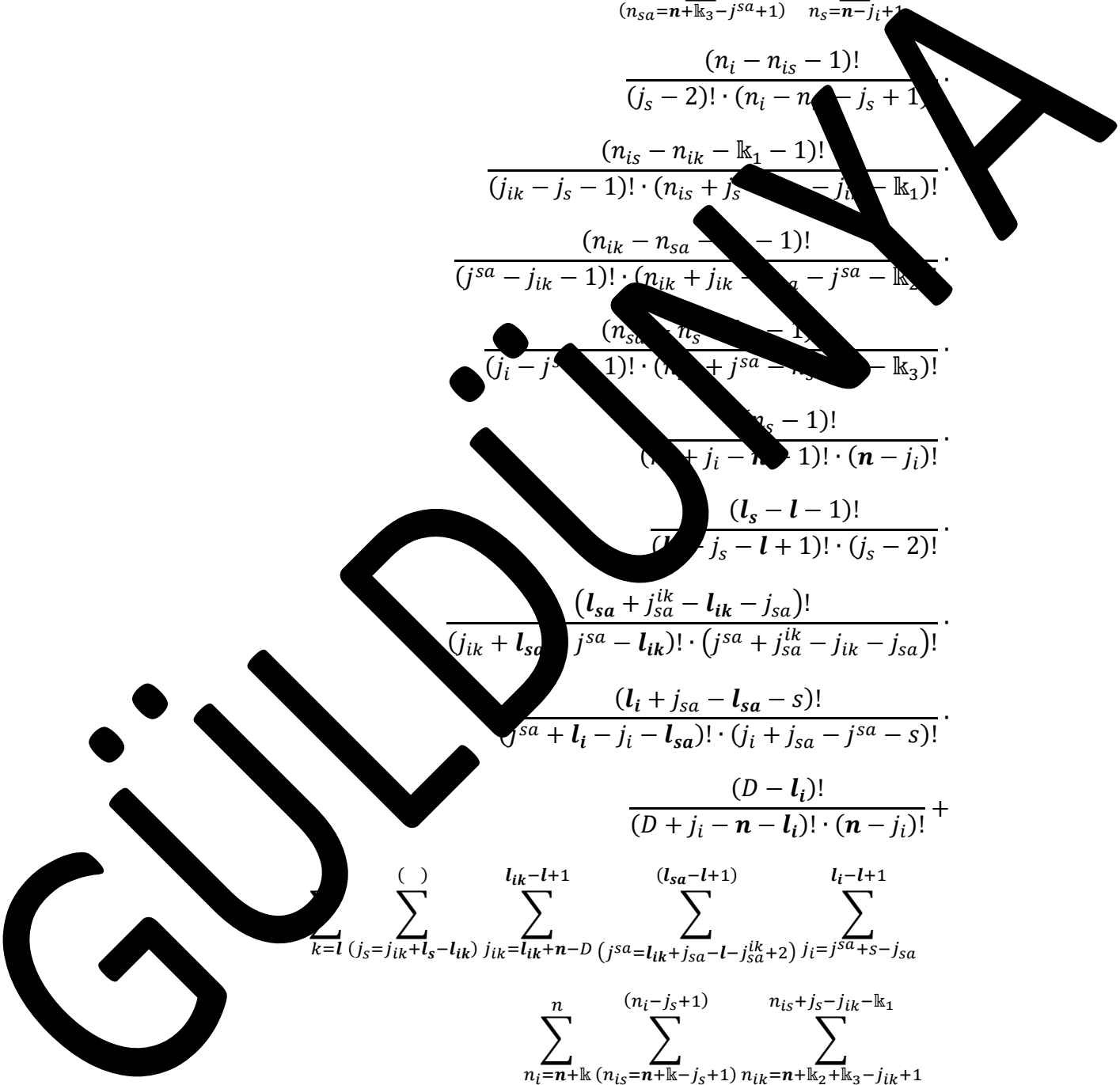
$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

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$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{sa} - n_s - l_{k_3})!} \cdot \\ \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{D}{l}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-l-j_{sa}^{ik}+2)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - l - 1)!} \cdot \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{\binom{D-l_i}{j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=0}^{j^{sa}+j_{sa}^{ik}-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(n - l)!}{(D + j_s - n - l)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_i\} \wedge$$

$$s - 7 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_2 - 5 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 7$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_s+j_{sa}-l)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j^{sa}=l_i+n+j_{sa}-D-s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \\
 & \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_{is} - j_i - \mathbb{k}_3)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \left. \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \right) + \\
 & \left(\sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \right) \\
 & \sum_{i=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_s+j_{sa}-l) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}+1}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l - 1)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l - 1)!}$$

$$\frac{(n - l_i)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{(\cdot)}{(\cdot)}} \sum_{(j_s=j_{ik}+l_s-l_i)} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(n_{sa}=l_s+n_{sa}-D-1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{(n_i=n)} \sum_{(n_{is}=n+l_{is}+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}\} \wedge$

$s \geq 7 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{()}\right)$$

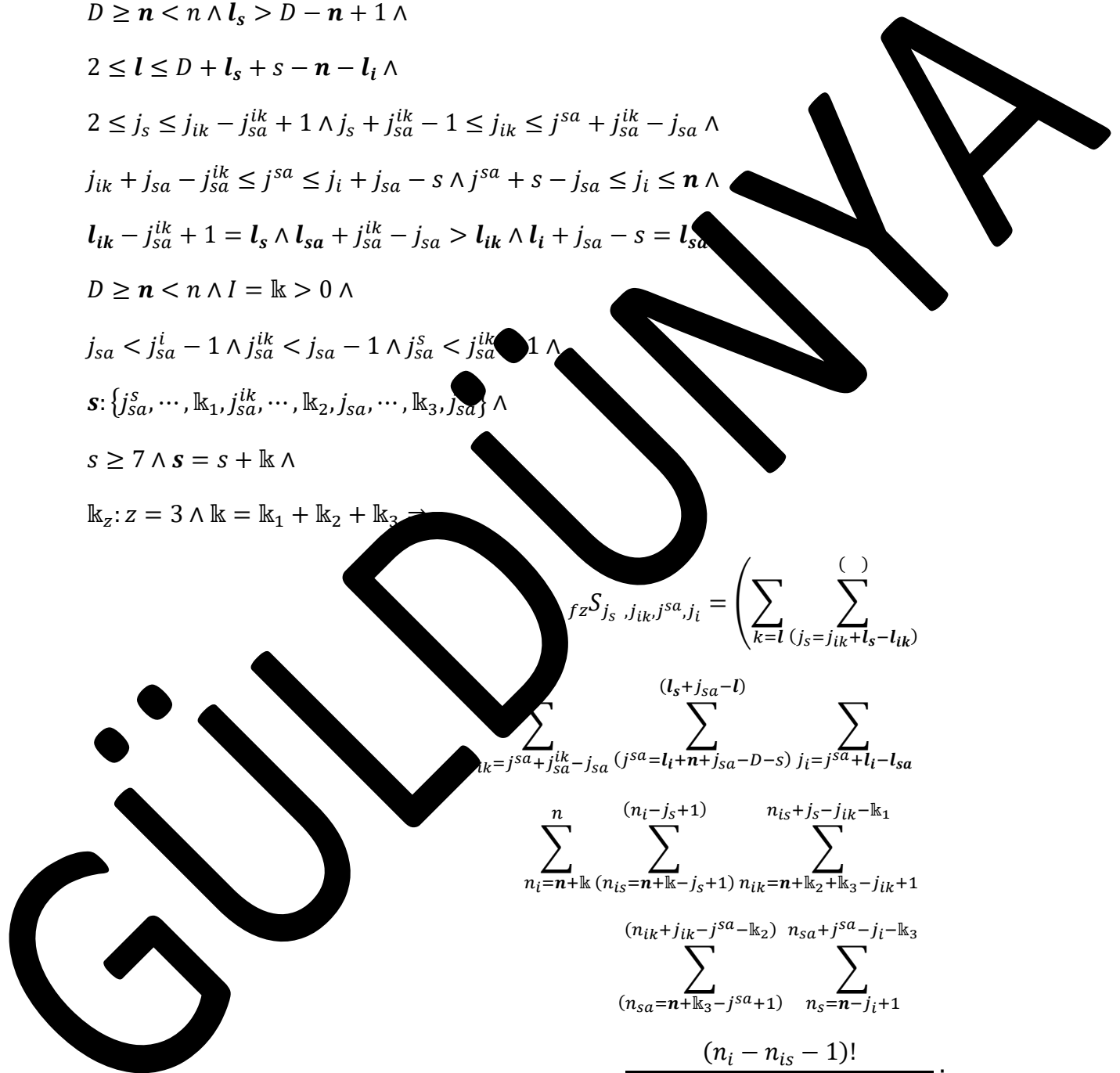
$$\sum_{ik=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k} \sum_{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$



$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l)!}{(D + j_i - n - l)! \cdot (n - l)!} +$$

$$\sum_{j_{ik}=l_s}^{j^{sa}+j_{ik}-j_{sa}-1} \sum_{j_{sa}=j_{sa}-D-1}^{j_{sa}-D-1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+j_{sa}-D)}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+l_k+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜMÜS

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(l_s + j_{sa}^{ik} - l)} \sum_{(j_{ik} = l_s + n + j_{sa}^{ik} - D - 1)}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j_i = j^{sa} + l_i - l_{sa})}^{(n_i + j_s - l_{ik} - l_{k_1})} \\
 & \sum_{(n_i = n + l_k)}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + l_k - j_{ik} - l_{k_1})}^{(n_{is} + j_s - l_{ik} - l_{k_1})} \sum_{(n_{ik} + j_{ik} - j_s - l_{k_2})}^{(n_{sa} + j^{sa} - j_i)} \\
 & \sum_{(j_i = n + l_s - l_{sa} + 1)}^{(n_i - n + l_s - l_{sa} + 1)} \sum_{(n_i - j_i + 1)}^{(n_i - n_{is} - l_s - l_{k_1} - 1)!} \cdot \frac{(n_i - n_{is} - l_s - l_{k_1} - 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - l_{k_1} - 1)!}{(j_{ik} - l_{k_1} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \frac{(n_{sa} - l_{k_2} - 1)!}{(j^{sa} - l_{k_2} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - l_{k_3} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^n \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{n-(j_s+j_{sa})} \sum_{n_{is}=n+k_1-1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMÜNYA

$$\left(\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

$$\left(\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \right)$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_s + 1)}^{(n_{is} + j_s - 1) - k_1}$$

$$\sum_{(n_{sa} = n_{ik} - j^{sa} + 1)}^{(j_{ik} - j^{sa} - k_2)} \sum_{(n_{sa} + j^{sa} - j_i - k_3)}^{(j_{ik} - j^{sa} - k_2)}$$

$$\frac{(j_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_i + j_{sa} - l - s + 1)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - l + 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

GÜLDENWA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > n + 1$$

$$D + l_s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+j_{sa}-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j^{sa}+l_i-l_s}^{(l_i+j_{sa}-l-s+1)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-lk_1)}^{(n_{is}+j_{ik}-lk_1)}$$

$$\sum_{(n_{ik}+j_{ik}-lk_2)}^{(n_{ik}+j_{ik}-lk_2)} \sum_{(n_{sa}=n_{is}+j_{sa}-lk_3)}^{(n_{sa}=n_{is}+j_{sa}-lk_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - lk_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!}$$

$$\frac{(n_{ik} - n_{sa} - lk_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - lk_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - lk_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq l \leq D + l_s + s - n - l_i \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$$\left(\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots$$

$$\dots \sum_{(n_{sa}=n+k_3-1)}^{(n_{ik}+j_{ik}-j^{sa})} \dots \sum_{n_s=n-j_i}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

GÜLDENWA

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\ \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\ \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{\binom{(\cdot)}{(j_s=j_{ik}+l_s-l_{ik})}} \sum_{\substack{l_s+j_{sa}^{ik}-l \\ j_{ik}=l_{ik}+n-D}} \sum_{\substack{(l_{sa}-l+1) \\ (j^{sa}=l_s+j_{sa}-l+1)}} \sum_{\substack{l_i-l+1 \\ j_i=j^{sa}+s-j_{sa}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s - j_i - 1)!} \cdot \\
 & \frac{(n - l - 1)!}{(j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{l=1}^{j^{sa} + j_s^{ik} - j^{sa} - 1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{l_{ik} + n - D} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - l)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^l - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots\} \wedge$$

$$s = 7 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \left(\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D - l_i)!}{(D + j_s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \right) + \\
 & \left(\sum_{k=l}^{(j_{ik}-j_{sa}^k+1)} \sum_{(j_s=l_s+\mathbf{n}-D)} \right) \\
 & \sum_{i_k=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-l)} \sum_{(j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s)}^{l_i-l+1} \sum_{j_i=j^{sa}+s-j_{sa}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_s - l_s - 1)! \cdot (j_i + j_s - j^{sa} - s)!}$$

$$\frac{(D - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=0}^{(j_{ik} - j_{sa})} \sum_{s=0}^{(n - j_{sa} - l_s - 1)} \sum_{j_{ik}=j_{sa}+k}^{n + j_{sa} - l_s - 1} \sum_{l_i=l_s+n-D}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+j_s+1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s-l)} \sum_{(j^{sa}=l_s+j_s-l+1)}^{(l_i-1)} \sum_{j_i=j^{sa}+s-1}^{(l_i-1)} \\
 & \sum_{n_i=n}^n \sum_{(n_{is}=n+l_{ik}-1)}^{(n_i-j_{ik}-l_{k_1})} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1})} \sum_{(n_{sa}=n_{k_3}-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k - k_3 - j_{ik} + 1}^{(n_{is} + j_s - j_{ik} - k_3)}$$

$$\sum_{(n_{sa} = n + k - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i - k_3}^{(n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_i - j_s - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik} - k_1)!} \cdot$$

$$\frac{(n_{ik} - j_{ik} - k_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot$$

$$\frac{(n_{sa} - j_{sa} - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n - l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

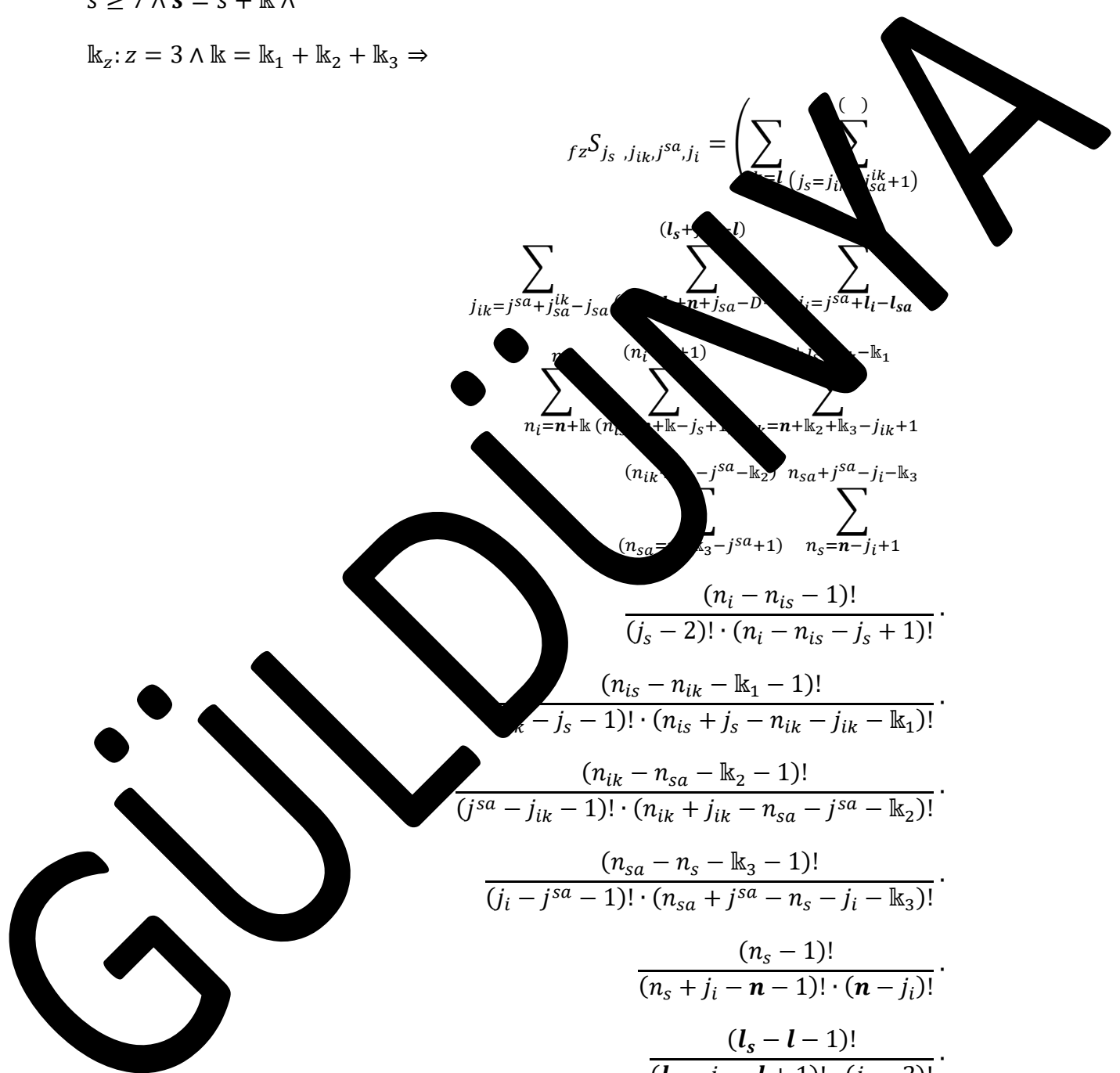
$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 7 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+1}^{()} \sum_{j_{sa}=j_{sa}^{ik}+1}^{()} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+l-1)} \sum_{n_i=n+j_{sa}-D}^{(l_s+l-1)} \sum_{n_{is}=j_{sa}+l_i-l_{sa}}^{(l_s+l-1)} \sum_{n_{ik}=n_{is}+l_{ik}-\mathbb{k}_1}^{(n_i+l-1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}+l-1)} \sum_{n_{is}=n_{ik}+l_{is}-j_s+1}^{(n_{is}+l-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+l-1)} \sum_{n_{sa}=n_{ik}-j_{sa}-\mathbb{k}_2}^{(n_{sa}+l-1)} \sum_{n_s=n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{sa}+l-1)} \sum_{n_{sa}=n_{ik}-\mathbb{k}_3-j_{sa}+1}^{(n_{sa}+l-1)} \sum_{n_s=n-j_i+1}^{(n_s+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$



$$\left(\sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-l)} \sum_{j_i=j^{sa}+l_i} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_{sa}=n+l_k-j^{sa}-l_{k2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{(j_s-j_{ik}+1)} \frac{(n_{is}-1)!}{(j_s-j_{ik}+1)! \cdot (n_i-j_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-l_{k1}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k1})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k2}-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}-n_{sa}-j^{sa}-l_{k2})!} \cdot \frac{(n_{sa}-n_s-l_{k3}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j^{sa}=l_s+j_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{sa} + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^j \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik})} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - l)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s + n - 1 - j_i)!}{(n_s + n - 1)!} \cdot \frac{(n - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - l_s - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + n - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq n < D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} - j_{sa} + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa} - j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq l_s < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^s, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j^{sa}=l_{sa}-l+1)}^{(l_{sa}-l+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_s=j_i+1)}^{(n_{sa}+j^{sa}-j_i)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{(j_s=j_{sa}^i - l_{ik})} \binom{(\quad)}{\quad} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^i-l}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \binom{(\quad)}{\quad} \sum_{j_{is}=l_{ik}+l_{sa}-l}^{(j_{is}=j_{sa}+s-j_{sa})} \binom{(\quad)}{\quad}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i=n+1)} \binom{(\quad)}{\quad} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \binom{(\quad)}{\quad} \sum_{n_{ik}=n_{sa}-j_{sa}-\mathbb{k}_2}^{(n_{ik}=n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \binom{(\quad)}{\quad}$$

$$\sum_{n_{sa}=n-\mathbb{k}_3-j_{sa}+1}^{(n_{sa}=n-j_i+1)} \binom{(\quad)}{\quad} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜNYA

$$\left(\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{sa}+j_{sa}^{lk}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$(n_{ik}+j_{ik}-j^{sa}-l_{k_1}+j^{sa}-j_i-l_{k_3})$$

$$(n_{sa}=n+l_{k_3}-j^{sa}-1) \quad n_s=n-j_i+l_{k_3}$$

$$\frac{(n_s - n_{ik} - l_{k_1} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}{(n_{ik} - n_s - l_{k_2} - 1)!}$$

$$\frac{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}{(n_{sa} - n_s - l_{k_3} - 1)!}$$

$$\frac{(j_i - l_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}{(n_s - 1)!}$$

$$\frac{(n_s + j_i - n - 1)! \cdot (n - j_i)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{l_i+n+j_{sa}^{lk}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

GÜLDENWA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s < D - \mathbf{n} + 1 \wedge$$

$$D + l_s + s - \mathbf{n} - l_i + 1 \leq l \leq D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_s - j_{sa}^{ik} \leq j^{sa} \leq j_s + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \geq 7, \{\mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=l_i+n}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j^{sa}-1)}^{(n_s=n-j_i)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{is} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq l \leq D + l_s + s - n - l_i \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 7 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i} = \left(\sum_{l=1}^{()} \sum_{j_s=j_{ik}+l}^{()} \sum_{j_{sa}=j_{ik}+l}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()} \right)$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_{ik}-l+1} \sum_{j_{sa}=j_{ik}+l_{sa}-D}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-n+1)} \sum_{n_{sa}=n+\mathbb{k}-j_s+1}^{(n_{sa}-j_{sa}+\mathbb{k}_1)} \sum_{n_s=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_s-n+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}-j_{sa}+\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_s-n+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\left. \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \right) +$$

GÜLDÜNYA

$$\begin{aligned}
 & \left(\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}^{ik}}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j^{sa}-j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j^{sa}+1)! \cdot (n_s=n-j_i+1)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-l_{k_2})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDENWA

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/230-231

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.1.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.4.3.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.4.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu

simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/233

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/190

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.1.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/233

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/190

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.2.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.3.1/233

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/190

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.3.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.1.4.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.4.1/190

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.4.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.6.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.6.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu

bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.1.6.3.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.6.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.1.1.1.1/118

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.1.1/80-81

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.1.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.1.1.2.1/118

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.2.1/80-81

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.2.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.1.1.3.1/118

tek kalan düzgün simetrik olasılık,
2.3.3.2.1.1.3.1/80-81

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.1.1.3.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.1.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.1.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.2.1/3-4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.2.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.2.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımsız simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.4.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.4.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.6.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.6.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.7.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.7.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.7.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımsız simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.2.7.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.2.7.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.2.7.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.7.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.7.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.7.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
ve herhangi bir durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.3.2.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.3.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.3.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin
herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.1.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.2.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin herhangi iki durumuna bağlı

tek kalan simetrik olasılık,
2.3.3.1.4.1.3.1/4

tek kalan düzgün simetrik olasılık,
2.3.3.2.4.1.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.4.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin her
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.1.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin her durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.2.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin her durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.4.1.3.1/839-840

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
ve herhangi iki durumunun bulunabileceği
olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.1.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.1.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.1.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve herhangi iki durumunun
bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.1.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.1.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.2.1.1/10

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve herhangi iki
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.2.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.5.2.2.1/10

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve herhangi iki
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.5.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.5.2.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.5.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.1.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki

durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.1.1/4

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.2.1.1/6

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.2.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.2.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.2.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.2.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.2.1/5-6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.4.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.4.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.4.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.2.1/5-6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.6.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.6.3.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.6.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.1.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.1.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.2.1/6

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.2.1/4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.6.7.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.6.7.3.1/3-4

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.6.7.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
herhangi bir ve son durumunun
bulunabileceği olaylara göre herhangi bir
ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.2.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.1.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.1.1/11

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.2.1/11

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.2.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.2.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.4.3.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.4.3.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrisinin ilk herhangi bir ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.1.1/7

tek kalan düzgün olmayan simetrik
olasılık, 2.3.3.3.9.6.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrisinin ilk herhangi bir ve son

durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.6.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.3.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,
2.3.3.1.9.7.3.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.1.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.2.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.1.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.1.1/7

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.2.1/7

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,
2.3.3.1.7.2.3.1/5

tek kalan düzgün simetrik olasılık,
2.3.3.2.7.2.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.2.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.1.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.2.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.1.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.3.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.1.1/15

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.2.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.3.1/10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.4.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.3.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.6.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.3.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.1.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.1.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.2.1/16

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.10.7.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.3.1/9-10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.3.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.1.1/17-18

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.2.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.3.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.1.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.3.1/10-11

VDOİHİ’de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ’de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrik ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan 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 diğer kaynak kullanılmamıştır.