

VDOIHI

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

Cilt 2.3.1.3.7.1.1.714

İsmail YILMAZ

2023

Matematik / İstatistik / Olasılık

ISBN: 978-625-01-4952-2

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık Cilt 2.3.1.3.7.1.1.714

İsmail YILMAZ

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık-Cilt 2.3.1.3.7.1.1.714 / İsmail YILMAZ

e-Basım, s. XXVI + 772

Kaynakça yok, dizin var

ISBN: 978-625-01-4952-2

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

Dili: Türkçe + Matematik Mantık



K. Atatürk

Türkiye Cumhuriyeti Devleti
Kuruluşunun
100. Yılı Anısına

DÜZELTME

Bu cilt için

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

simgesi yerine

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

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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- ✓ Tüm tabanlarda, tüm dağılım türlerinde ve istenildiğinde dağılım türü ve tabanı değiştirerek çalışabilecek elektronik teknolojisinin temelidir.
- ✓ Teorik kabullerle genetikle ilişkilendirilmiştir.
- ✓ Bilgi merkezli değerlendirme yöntemidir.

Sanırım bilgi ve teknolojideki kaderimiz veriyle ilişkilendirilmiş.

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GÜLDÜNYA

Simge ve Kısaltmalar

n : olay sayısı

n : bağımlı olay sayısı

m : bağımsız olay sayısı

l : bağımsız durum sayısı

I : simetrisinin bağımsız durum sayısı

ll : simetrisinin bağımlı durumlarından önce bulunan bağımsız durum sayısı

I : simetrisinin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

lk : simetrisinin bağımlı durumları arasındaki bağımsız durumların sayısı

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

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

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

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

l_s : simetrisinin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

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

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

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

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

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

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

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

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

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

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

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

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

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

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

D : bağımlı durum sayısı

D_i : olayın durum sayısı

s : simetrinin bağımlı durum sayısı

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

m : olasılık

M : olasılık dağılım sayısı

U : uyum eşitliği

u : uyum derecesi

s_i : olasılık dağılımı

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

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

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

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

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

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

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

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

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

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

simetrisinin son durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

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

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

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

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$f_z S_{j_i, 0}^{DOSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız

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

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

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

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$f_{z \Rightarrow j_s, j_{ik}, j^{sa}, 0} S^{DOSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı toplam düzgün olmayan simetrik olasılık

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durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

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$fz,0S_{\Rightarrow j_s, \Rightarrow j_{ik}, j^{sa}, j_i, D}^{DOSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz

bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

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

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

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E2

BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

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

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

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

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

Bağımlı dağılımlar; a) olasılık dağılımlardaki simetrik, (toplam) düzgün simetrik ve (toplam) düzgün olmayan simetrik b) ilk simetrik, ilk düzgün simetrik ve ilk düzgün olmayan simetrik c) tek kalan simetrik, tek kalan düzgün simetrik ve tek kalan düzgün olmayan simetrik ve d) kalan simetrik, kalan düzgün simetrik ve kalan düzgün olmayan simetrik olasılıklar olarak incelendiğinden, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda bu başlıklarla incelenmekle birlikte, bu simetrik olasılıkların bağımsız durumla başlayan ve bağımlı durumlarıyla başlayan dağılımlara göre de tanım eşitlikleri verilmektedir.

Farklı dizilimsiz dağılımlarda simetrinin durumlarının olasılık dağılımındaki sırasına göre simetrik olasılıkları etkilediğinden, bu bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımları da etkiler. Bu nedenle bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrinin durumlarının bulunabileceği olaylara göre simetrik olasılık eşitlikleri, simetrinin durumlarının olasılık dağılımındaki sıralamalarına göre ayrı ayrı verilecektir. Bu eşitliklerin elde edilmesinde bağımlı olasılıklı farklı dizilimsiz dağılımlarda simetrinin durumlarının bulunabileceği olaylara göre çıkarılan eşitlikler kullanılmaktadır. Bu eşitlikler, bir bağımlı ve bir bağımsız olasılıklı dağılımlar için VDO'nun Çizim 1'de çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımların yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırmalar kullanılacaktır. Bu adlandırılmasına simetrinin bağımlı ve bağımsız durumlarına göre ve dağılımın bağımsız veya bağımlı durumla başlamasına göre "Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı/bağımsız-bağımlı/bağımlı-bir bağımsız/bağımlı-bağımsız/bağımsız-bağımsız durumlu/bağımsız/bağımlı" kelimeleri getirilerek, simetrinin bağımlı durumlarının bulunabileceği olaylara göre bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz adları elde edilecektir. Simetriden seçilen durumların bulunabileceği olaylara göre simetrik, düzgün simetrik veya düzgün olmayan simetrik olasılık için birden fazla ad kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

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

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

**SİMETRİDEN SEÇİLEN DÖRT DURUMA GÖRE TOPLAM DÜZGÜN OLMAYAN
SİMETRİK OLASILIK**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

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

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

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

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

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

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

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

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

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

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})} \sum_{j_i=s}$$

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

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

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

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

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

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

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

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

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

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

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

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

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot$$

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

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

$$\sum_{k=1}^{(n_{is}-1)} \sum_{l=1}^{(j_s-1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z \in \{1, 2, 3\} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \binom{()}{j_{sa}=j_{sa}} \sum_{j_i=s}$$

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

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

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_i \leq D + s - \mathbf{n} \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=i}^{()} \sum_{l=0}^{()} \\
& \sum_{j_{sa}=j_{sa}^{ik}}^{l_i - i^{l+1}} (j^{sa} = j_{sa}) \sum_{j_i=s} \\
& \sum_{n_{ik}=0}^n \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i - j_{ik} - k_1 + 1)} \\
& \sum_{n_{sa}=n+k_3-j^{sa}+1}^{j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik} - l_{k_2})!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik}-n_{sa}-\mathbb{k}_2-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-\mathbb{k}_2)!}$$

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa} - k_2)!}$$

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

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

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

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

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

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

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

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

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

$$\sum_{k=0}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=0}^{(\cdot)} \sum_{(j_{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=0}^{(\cdot)} \sum_{(n_{ik}=n_i - j_{ik} - k_1 + 1)}$$

$$\sum_{n_{ik}=0}^{(\cdot)} \sum_{(n_s=n_{sa} + j_{sa}^s - j_i - k_3)}$$

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

$$D \geq n < n \wedge l_i < D + s - n \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=0}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

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

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

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

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

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

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

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

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

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

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

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

$$f^z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=2)}$$

$$\begin{aligned}
& \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{\binom{(\quad)}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}}} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\
& \sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_k+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{\binom{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j_{sa}+1}} \sum_{\binom{(n_{sa}+j_{sa}-j_i-1)}{n_s=n+l_{k_3}-j_i+1}} \\
& \frac{\binom{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!}}{\binom{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}} \\
& \frac{\binom{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j_{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!}}{\binom{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1) \cdot (n_{sa}+j_{sa}-n_s-j_i)!}} \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
& \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
\end{aligned}$$

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

$$\begin{aligned}
& \sum_{j_{ik}=j_{sa}^{lk}} \sum_{\binom{(\quad)}{j_{sa}=j_{sa}}} \sum_{j_i=s}^{l_i-i+1} \\
& \sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_{ik}-l_{k_1}+1)}{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}}
\end{aligned}$$

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-l-k_1+1)}^{()}$$

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

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

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

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

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

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

$$D \geq n < n - l = k_1 \wedge$$

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

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

$$s \geq 5 \wedge s = k_1 + k_2 \wedge$$

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

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{()}$$

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

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

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

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

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

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

GÜLDÜSÜZ

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

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

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

$$\frac{(l_i + j_s - l_{sa} - 1)!}{(l_i + j_s - j_i - l_{sa} - 1)! \cdot (n - s)!}$$

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

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

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

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

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

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{k} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1+l_{sa}+j_s-k-j_{sa}+1} \binom{D+l_s+s-n-l_i}{j_s} \sum_{j_i=j_{sa}+j_{sa}^{ik}-j_{sa}}^{j_i=j_{sa}+j_{sa}^{ik}-j_{sa}+l_i+j_s-k-j_{sa}+1} \binom{D+l_s+s-n-l_i}{j_i} \sum_{n_i=n+k}^n \binom{n}{n_i} \sum_{n_{ik}=n_i-j_s-j_{ik}-k_1}^{n_{ik}=n_i-j_s-j_{ik}-k_1} \binom{n_i-j_s+1}{n_{ik}} \sum_{n_{sa}=n_{ik}-j_{sa}-k_2}^{n_{sa}=n_{ik}-j_{sa}-j_i-k_3} \binom{n_i-j_s+1}{n_{sa}} \sum_{n_{sa}+j_{sa}-j_i-k_3}^{n_{sa}+j_{sa}-j_i-k_3} \binom{n_i-j_s+1}{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_{sa}+j_{sa}-j_i-k_3)!}{(n_{sa}+j_{sa}-j_i-k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

$$n \geq n - 1 \wedge I = k > 0 \wedge$$

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

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

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

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

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

$$\begin{aligned}
 &\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=l_{ik}+s-k-j_{sa}^{ik}+2}
 \end{aligned}$$

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

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

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

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

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

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_i + j_s - l_{sa} - 1)!}{(l_i + j_s - j_i - l_{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{l_s + s - n} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_{ik} + s - k - j_{sa}^{ik} + 1} \sum_{j_i = l_i + n - D}^{n} \sum_{j_s = n + \mathbb{k}}^{n} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

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

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

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

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

$$fz^S j_s j_{ik} j_{sa} j_i = \sum_{k=0}^{i-1} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{i-1-k} \sum_{j_i=l_i+n-D}^{i+s-k} \sum_{j_{ik}=j_{sa}^{ik}-j_{sa}+1}^{j_{sa}^{ik}-j_{sa}} \sum_{j_{sa}=j_{sa}^{ik}-j_{sa}+1}^{j_{sa}^{ik}-j_{sa}} \sum_{n_i=n}^{n} \sum_{n_{is}=n+k_1+1}^{(n_i-j_{sa}^{ik}-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n+k_3-j_{sa}^{ik}+1}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^{ik}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa}^{ik} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_s=1}^{l_i} \sum_{j_s=1}^{l_i}$$

$$\sum_{j_{sa}=j_{sa}^{lk}}^{l_i} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

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

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

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

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

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

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

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

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

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

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

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

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

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3)! \cdot (j_{sa}^{sa})! \cdot (j_{sa}^{sa}-j_s-s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$fz S_{j_s, j_{ik}, j_{sa}^s, j_i} = \sum_{i=0}^{l-1} \sum_{j_s=j_{ik}^{ik}+1}^{(j_s=j_{ik}^{ik}+1)} \sum_{(l_i+n_i-D-s-1)}^{(l_i+n_i-D-s-1)} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}}^{(j_{ik}=j_{sa}+j_{sa}^{ik})} \sum_{(j_{sa}=j_{sa}+j_{sa}^{ik})}^{(j_{sa}=j_{sa}+j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{(j_i=l_i+n-D)} \sum_{(n_i-1)}^{(n_i-1)} \sum_{n_i=n+k}^{(n_i=n+k)} \sum_{(n_{is}+k-j_s+1)}^{(n_{is}+k-j_s+1)} \sum_{(n_{ik}+j_{sa}-k_2)}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(n_s-k_3-j_{sa}+1)}^{(n_s-k_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDÜZMAYA

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

GÜLDENWA

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{l_i!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
& \sum_{j_{ik}=0}^{l_{sa} + j_{sa}^{ik} - k - j_{sa}^{ik}} \sum_{j_{ik}=0}^{l_i - k + 1} \sum_{j_{ik}=0}^{n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{j_{ik}=0}^{n + k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+k_2+k_3-j_{ik}+1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2) \cdot n_{sa}+j^{sa}-j_i-k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

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

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

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

$$\sum_{j_{ik}=l_i}^{()} \sum_{j_{sa}=l_i}^{()} \sum_{j_i=l_i}^{()}$$

$$\sum_{n_{sa}=l_i}^{n} \sum_{n_{ik}=l_i}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{s_3}=l_i}^{(n_{s_3} - j_{ik} + 1)}$$

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

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

$$\binom{(n_{sa}-j_{sa}-k_2) - (n_{sa}+j_{sa}-j_i-k_3)}{(n_{sa}-j_{sa}-k_2)}$$

$$\frac{(n_{sa}-j_{sa}-k_2 - n_{sa} + j_{sa} - j_i + k_3)!}{(n_{sa}-j_{sa}-k_2)! \cdot (n + j_{sa} - j_s - s)!}$$

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

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

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

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

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

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

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

$$s \geq n - l_i \wedge I = k > 0 \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_i + n - D - s)} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{l_i-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

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

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

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

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

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

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

$$\sum_{j_s=1}^{(l_s)} \sum_{j_i=1}^{(j_s)}$$

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

$$\sum_{n_i=n+lk}^{(n_i - j_{ik} - lk_1 + 1)} \sum_{(n_{ik}=n+lk_2+lk_3 - j_{ik} + 1)}$$

$$\sum_{n_{sa}=n+lk_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - lk_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - lk_3)}$$

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

$$\frac{(n_{ik} - n_{sa} - lk_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \binom{(n_i-j_s+1)}{(n_{is}=n+lk-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j_{sa}-lk_2)!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

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

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+lk}^n \binom{(n_i-j_s+1)}{(n_{is}=n+lk-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-lk_1}$$

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

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

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

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

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

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

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \\
& \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} \cdot \\
& \sum_{k=0}^{D+l_s+s-n} \sum_{i=l_s-k+1}^{l_s-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{j_s=j_s+j_{sa}^{ik}-1}^{j_s=j_s+j_{sa}^{ik}-1} \sum_{j_{ik}=j_{ik}+j_{sa}-j_{sa}}^{j_{ik}=j_{ik}+j_{sa}-j_{sa}} \sum_{j_i=j^{sa}+s-j_{sa}}^{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{j_i=n+\mathbb{k}}^{j_i=n+\mathbb{k}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}=n+\mathbb{k}-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

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

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

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

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

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

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

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

$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_{ik}+j_{sa}^{ik}-k-s+1}
\end{aligned}$$

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

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

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

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

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

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

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik} - 1, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot$$

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

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

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

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

$$\sum_{k=0}^{j_{sa}^{ik}} \sum_{j_{sa}^{ik+1}}^{()}$$

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

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

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

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot$$

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{j_i=s}^{()}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}^{ik}=j_{sa})} \sum_{j_i=s}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{sa}=n_{is}-j^{sa}+1) \cdot n_s - j_i + 1}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa} - k_2)!}$$

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

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

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

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

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

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

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

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

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$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

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

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

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

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

$$l_{ik} - \mathbb{k}_1 + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{()} \sum_{l_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j_{sa}^{ik}}^{()} \sum_{j_i=s}^{()}$$

$$\sum_{n_i=1}^n \sum_{k_1=0}^{()} \sum_{k_2=0}^{()} \sum_{k_3=0}^{()}$$

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

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

$$D \geq n < n \wedge l_i \leq D + s \wedge l_i \leq n$$

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

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

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

$$D \geq n < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$$

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

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

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

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

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

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_k+l_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_{k_1})} \\
 & \sum_{(n_{sa}=n+l_k+l_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{(n_{sa}+j_{sa}-j_i-1)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{sa}=j_{sa})}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_{ik}-l_{k_1}+1)}^{(n_{ik}=n+l_k+l_3-j_{ik}+1)}
 \end{aligned}$$

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

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

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

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

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

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

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

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

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

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

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

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

$s \geq s + k \wedge$

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

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

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

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

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

$$\sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{()} \sum_{j_i=l_{i_k}+s-k-j_{s_a}^{i_k}+2}^{l_i-k+1}$$

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

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

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

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

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

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

$$\sum_{n_{ik}+j_{i_{k_1}}+j_{i_{k_2}}+j_{i_{k_3}}=n_{ik}+j_{i_{k_1}}+j_{i_{k_2}}+j_{i_{k_3}}-l_{k_2}}^{n_{ik}+j_{i_{k_1}}+j_{i_{k_2}}+j_{i_{k_3}}=n_{ik}+j_{i_{k_1}}+j_{i_{k_2}}+j_{i_{k_3}}-l_{k_2}} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i-l_{k_3}}^{n_s=n_{sa}+j_{sa}^{ik}-j_i-l_{k_3}} \binom{n+l_k-j_s}{n_{ik}+j_{i_{k_1}}+j_{i_{k_2}}+j_{i_{k_3}}-l_{k_2}} \binom{n+l_k-j_s}{n_s} \binom{n+l_k-j_s}{n_{sa}+j_{sa}^{ik}-j_i-l_{k_3}}$$

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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

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

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

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

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

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

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik+1})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik+1}}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{l_i+n-D}^{l_s+s-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik})}^{(n_i-j_{ik}+k_1)}$$

$$\frac{(n_{sa}=n_{sa}-j^{sa}+1) \cdot n_s \cdot (j_i+1)}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_i-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik+1})}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_s+j_{sa}^{lk}-k} \binom{(\quad)}{\quad} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{(\quad)}{\quad}} \sum_{l \binom{(\quad)}{\quad}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_{ik}-l_{k_1}+1)}{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - j^{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{i_k=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=j_{ik}^{ik}+1}^{i^{l-1}} \sum_{j_{sa}=j_{sa}^{ik}+1}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{j_{sa}=j_{sa}^{ik}+1}^{(l_i+j_{sa}^{ik}+1)} \sum_{j_{is}=j^{sa}+s-j_{sa}}^{(i+j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^{(n_i-1)} \sum_{n_{is}=n+l_k+l_{ik}-j_s+1}^{(n_i-1)} \sum_{n_{sa}=n+l_k+l_{ik}-j_{ik}+1}^{(n_i-1)} \\
 & \sum_{n_{sa}=n+l_k+l_{ik}-j_{sa}+1}^{(n_{ik}+j_{sa}^{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^{ik}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i+j_{sa}-i-l-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+j_{ik}-j_{sa}-l_i-k_2-k_3}^n \sum_{(n_i-j_{ik}-l_i-k_2-k_3+1)}$$

$$\sum_{n_{sa}=j_{ik}-j^{sa}-l_i-k_2-k_3}^{n+j_{ik}-j^{sa}-l_i-k_2-k_3} \sum_{(n_{sa}+j^{sa}-j_i-l_i-k_2-k_3)}$$

$$\frac{(n_{sa} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{sa} - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{sa} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - \dots - l_i)! \cdot (n - \dots)}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{sa} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = \dots \wedge$

$D + s - n < l_i \leq D + l_s + \dots - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^i \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^i, \dots, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \dots$

$\mathbb{k}_z: z = \dots \wedge \mathbb{k} = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - k_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
\end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k-s+1)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
\end{aligned}$$

$$\begin{aligned}
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (n - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - \dots)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=j_{sa}^{ik}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{(l_i+j_{sa}-i^{l-s+1})} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1} \sum_{(n_s=n-j_i+1)} \sum_{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \binom{()}{j_{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{n_i=n+k} \binom{()}{j_s=j_{ik}-k_1}$$

$$\binom{()}{n_{sa}=n_{ik}+j_{sa}-k_2} \binom{()}{n_{sa}=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_{sa} - s - k_1 - k_2 - k_3)!}{(n_{sa} - j_s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n \wedge l_i \wedge$$

$$1 \leq j_{sa} < j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n_{sa} \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}-j_{ik}+1}^{n_{is}+j_s-\mathbb{k}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-j_{ik})}^{(n_{sa}+j^{sa}-j_{ik})}$$

$$\frac{(n_i - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik} = l_i + n + j_{sa}^{lk} - D - s}^{l_{ik} - k + 1} \sum_{(j_{sa} = j_{ik} + j_{sa} - j_{sa}^{lk})}^{(l_i + j_{sa} - k - s + 1)} \sum_{j_i = j_{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = j_i + 1}^{n_{sa} + j_{sa} - j_i - 1} \\
 & \frac{(n_i - 1)!}{(j_s - 2)! (n_i - n_{is} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} + 1)!}{(j_{ik} - j_{sa} - 1)! (n_{is} + j_{sa} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! (n_{ik} + j_{sa} - n_{sa} - j_{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s + 1)!}{(j_i - j_{sa} - 1)! (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(\quad)} \sum_{l=1}^{(\quad)} \\
 & \sum_{j_{ik} = j_{sa}^{lk}}^{(l_i + j_{sa} - l - s + 1)} \sum_{(j_{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j_{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)}
 \end{aligned}$$

GÜLDÜSÜMBA

$$\begin{aligned}
& \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - j^{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{k=l_{ik}+1}^{l_i} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{(j_i=j^{sa}+s-j_{sa})}^{()} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i-j_s+1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{()} \\
& \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=j_{ik}+1}^{i^{l-1}} \binom{(\quad)}{j_s=j_{ik}+1} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_s+j_{sa}^{ik}-k} \sum_{j_{sa}=j_{sa}^{ik}-s+1}^{(l_i+j_{sa}^{ik}-s+1)} \sum_{j_{sa}=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}_1}^{(n_i-1)} \sum_{n_{is}=n+\mathbb{k}_1-j_s+1}^{(n_i-1)-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{ik}+j_{sa}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l_s=1}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{(l_i+j_{sa}-l_s-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_1+l_2+l_3-j_{ik}-1}^n \sum_{n_k=n+l_2+l_3-j_{ik}-1}^{(n_i-j_{ik}-1)}$$

$$\sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_{ik}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{(j_i=j^{sa}+s-j_{sa})}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - l_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{ik} + j_{sa} - s = l_s \wedge$

$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1$

$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(j_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (l_s - \dots - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - \dots)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
& \sum_{k=j_{sa}^{ik}}^{(i+j_{sa}-i^{l-s+1})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j_{sa}=j_i+j_{sa}-j_{sa})}^{()} \sum_{(j_{sa}-j_{sa})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i+k)} \sum_{(n_i-k)}^{(n_i-k)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{()} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{()}$$

$$\frac{(n_{sa}+j_{sa}-k_1-k_2-k_3)!}{(n_{sa}+j_{sa}-k_1-k_2-k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s < D - n \wedge l_i < n$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$l_i \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}-j_{ik}+\mathbb{k}_1}^{n_{is}+j_{sa}-k-\mathbb{k}_1} \sum_{j_{ik}+1}^{n_{ik}+\mathbb{k}_1}$$

$$\sum_{(j^{sa}+1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{(j^{sa}+1)}^{n-j_i+1}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_i+j_{sa}-k-s+1)} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2+l_3-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_k+l_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_{sa}-n_{sa}-j_{sa}-l_{k_2})!} \cdot \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{D-l_i}{j_s-1}} \sum_{j_{ik}=j_{sa}^{lk}} \\
 & \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-l-s+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_2+l_3-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}
 \end{aligned}$$

GÜLDÜSÜMBA

$$\begin{aligned}
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - j^{sa} - l_{k_3} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{k_3} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+n-s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_s+j_{sa}^{lk}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j^{sa})! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}=j_s-1}^{j_{ik}=j_s} \sum_{j_{sa}=j_{sa}^{ik}-1}^{j_{sa}=j_{sa}^{ik}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{j_i=l_{sa}+n+s-D-j_{sa}} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n_{sa}=n+k_3-j_{sa}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

GÜLDÜNKYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=j_{ik}^{ik}+1}^{i^{l-1}} \binom{(\cdot)}{j_s=j_{ik}^{ik}+1} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \binom{(\cdot)}{j_{ik}=j_{sa}^{ik}+1} \sum_{j_i=j_{sa}^{ik}+1}^{l_{sa}+s-k-1} \binom{(\cdot)}{j_i=j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+k}^{(n_i-1)} \binom{(\cdot)}{n_i=n+k} \sum_{n_{is}=n+k-j_s+1}^{(n_{is}-1)} \binom{(\cdot)}{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{ik}-1)} \binom{(\cdot)}{n_{ik}=n+k_2+k_3-j_{ik}+1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \binom{(\cdot)}{(n_{sa}=n+k_3-j^{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s-1)} \binom{(\cdot)}{n_s=n-j_i+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l_i}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{sa}+s-i-l-j_{sa}}$$

$$\sum_{n_i=n+l_{sa}+n+s-D-j_{sa}}^{n} \sum_{n_{ik}=n+l_{sa}+n+s-D-j_{sa}}^{(n_i-j_{ik}-1)}$$

$$\sum_{n_{sa}=n+l_{sa}+n+s-D-j_{sa}}^{n} \sum_{n_{ik}=n+l_{sa}+n+s-D-j_{sa}}^{(n_i-j_{ik}-1)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{ik}+s-k-j_{sa}^{ik}+1}$$

GÜLDÜZÜM YA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_{sa} - j_{sa} - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_s \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1$

$\mathbb{k}_z: z = 1, 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\quad)} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} +
\end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{\binom{()}{j^{sa}=j_i+j_{sa}-s}} \sum_{j_i=l_s+s-k+1}^{l_{sa}+s-k-j_{sa}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (l_s - \dots - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - \dots)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=j_{sa}^{ik}} \sum_{l=j_s}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{sa}+s-l-j_{sa}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_s+n-j_i+1)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{(j_{sa}=j_i+j_{sa}-s)} \sum_{j_i=...} \binom{l_s-k}{j_{sa}-j_{sa}}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_i-n+k)}$$

$$\binom{()}{(n_{sa}=n_{ik}+j_{sa}-k_2)}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_i - j_s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \wedge D - n < l_i \wedge$$

$$1 \leq j_{sa} < j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - l_i \leq l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$n - j_i \leq l_i \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk-j+1}^{n_{is}+j_s-k-lk_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-j_i)!}{(n_{is}-n+lk-j+1)! \cdot (n-j_i+1)!}$$

$$\frac{(n_i - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}{(n_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - lk_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)}{(j_s-2)(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_{sa}-n_{is}+n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j_{sa}-j_{ik}-1)(n_{ik}+j_{sa}-n_{sa}-j_{sa}-l_{k_2})!} \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)(n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j_{sa}=l_{sa}+n-D)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_2+l_3-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}
 \end{aligned}$$

$$\begin{aligned}
& \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - j^{sa} - l_{k_1} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{k_1} - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{n_i=n+l_{k_1}}^n \sum_{(n_{is}=n+l_{k_1}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{sa}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s=j_{ik}-j_{sa}^{ik}+1)} \\
& \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_s=j_{sa}^{ik}+1}^{j_s=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_i=j_{sa}^{ik}+1}^{j_i=j^{sa}+s-j_{sa}} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}=n+k_3-j^{sa}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=j_{ik}^{ik}+1}^{i^{l-1}} \sum_{j_{sa}=j_{sa}^{ik}+1}^{(j_s)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}-k}^{l_s+j_{sa}^{ik}-k} \sum_{j_{sa}=j_{sa}^{ik}-k+1}^{(l_{sa}+j_{sa}^{ik}-k+1)} \sum_{j_{sa}=j^{sa}+s-j_{sa}}^{(j_s)} \\
 & \sum_{n_i=n+l_k}^{(n_i-1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{(n_i-1)} \\
 & \sum_{n_{ik}+j_{sa}-j^{sa}-l_{k_2}}^{(n_{ik}+j_{sa}-j^{sa}-l_{k_2})} \sum_{n_{sa}=j^{sa}-j_i-l_{k_3}}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \sum_{n_s=n-j_i+1}^{(n_s+l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa} - i_{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_{sa}+k_1}^n \sum_{n_k=n+l_{sa}+k_2+k_3-j_{ik}+1}^{(n_i-j_{ik}-l_{sa}+1)}$$

$$\sum_{n_{sa}=n-l_{sa}-j^{sa}+1}^{(n_i-j_{ik}-l_{sa}+1)} \sum_{(j^{sa}-j_{ik}-k_2+l_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_{i_s} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{i_s} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_{sa} - j_{sa} - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_s \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1$

$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
& \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (n - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - \dots)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=i}^{(\quad)} \sum_{l(j_s=1)}^{(\quad)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa} - i + 1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \binom{()}{(j_{sa}=j_i+j_{sa}-j_{sa})}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_i-k_1-k_2-k_3)}$$

$$\binom{()}{(n_{sa}=n_{ik}+j_{sa}-k_2)}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_i - k_1 - k_2 - k_3 - j_s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n \wedge l_i \leq D - n$$

$$1 \leq j_{sa} < j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - l_i \leq l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$l_i \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{lk}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk-j_{ik}+1}^{n_{is}+j_s-lk_1}$$

$$\frac{(n_{ik}+j_{ik}-j_{sa}^{lk_2}) \cdot (n_{sa}+j^{sa}-j_{sa}^{lk_2})}{(n_{ik}-n+lk-j_{ik}+1) \cdot (n_{sa}+j^{sa}-j_{sa}^{lk_2})} \sum_{(j_i=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(j_{ik}=n+lk-j_{ik}+1)}^{(n_{ik}-j_{ik}+1)}$$

$$\frac{(n_i - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - lk_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2) \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1) \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{()}{}} \sum_{(j_s=1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(l_{sa}-i+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_{ik}-k_1+1)}^{(n_{ik}=n+k_2+k_3-j_{ik}+1)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - j^{sa} - l_{k_2} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{k_2} - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{()} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{()} \\
 & \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{n-D-j_{sa}} \sum_{j_{sa}=j_s+j_{sa}^{ik}-1}^{l_{sa}-k} \sum_{(j_i=l_{sa}+n-D)}^{j_i=j^{sa}+s-j_{sa}} \sum_{j_{sa}=j_s+1}^{n} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜNKYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \frac{(l_{ik} - j_{sa}^{ik+2})!}{(l_{sa} + n - l_{ik} - j_{sa}^{ik+2})!} \cdot \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}}^{(l_s - k + 1)} \sum_{n_{ik}=n+l_k}^{(n_{is} - k + 1)} \sum_{n_{sa}=n+l_k-j_s+l_{ik}-k_1}^{(l_{sa} - k + 1)} \sum_{n_s=n+l_k+l_{ik}-j_{sa}-k_1}^{(n_{sa} - k + 1)} \sum_{n_{ik}=n+l_k+l_{ik}-j_{sa}-k_1}^{(n_{is} - k + 1)} \sum_{n_{sa}=n+l_k+l_{ik}-j_{sa}-k_1}^{(n_{sa} - k + 1)} \sum_{n_s=n+l_k+l_{ik}-j_{sa}-k_1}^{(n_s - k + 1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} l$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa}-i_{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2+j_{ik}+1)}^{(n_i-j_{ik}-lk_1+1)}$$

$$\sum_{n_{sa}=n+lk_3-j^{sa}}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)}$$

$$\sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-lk_2)!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_{ik}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{lk}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{lk}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-lk_1}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_i\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i_l-1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \cdot \\
& \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{ik} = l_{sa} + n - D)} \sum_{(j_s=1)} \sum_{(j_s=1)} \\
& \sum_{n_i=n+l_k} \sum_{(n_{ik}=n+l_k+l_3-j_{ik}+1)} \sum_{(n_i-j_{ik}-l_{k_1}+1)} \\
& \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1} \sum_{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_s-k_2-k_3)}^{()} \sum_{j_i=j_{sa}-k_3}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n_{is} + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n - l_i = k > \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s - j_{sa}^s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_{ik}+j_{sa}^{ik}-k-s+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_{ik}+j_{sa}^{ik}-k-s+2}^{l_i-k+1}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
& \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
\end{aligned}$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}^{(l_{sa}-i^{l+1})} l_{i-1}^{l+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2 - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(j_s)} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j^{sa} = j_i + j_{sa} - s)} \sum_{(j_i = s + 1)}^{l_{ik} + j_{sa}^{ik} - k - s + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{(j^{sa} = j_i + j_{sa} - s)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{\binom{()}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge l_i \leq n$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge n - a + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_3; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{l}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_{sa}-n_{sa}-j_{sa}-k_2)!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = \mathbf{n} + \mathbb{k} - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1 \\ n_{ik} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2) \\ (n_{sa} = \mathbf{n} + \mathbb{k}_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - \mathbb{k}_3 \\ n_s = \mathbf{n} - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_{sa} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\cdot)} \sum_{i=1}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik}} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = s}^{(l_{sa} - i^{l+1})} l_{i-1}^{l+1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)}$$

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$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i + j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i + j_{sa} - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = s+1}^{l_s + s - k} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{l_i}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j_{ik}-j_{sa})}^{()} \sum_{j_i=s}^{()}$$

$$\sum_{n_i=1}^n \sum_{k}^{()} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, k_1, j_{sa}^{ik}, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k; z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}^{ik}-k-s+1) \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n (n_i-j_s+1) \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_i} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}^{ik}-k-s+2)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{i_s} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{i_k} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1)}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1} \\
 & \sum_{(n_{s_a} = \mathbf{n} + \mathbb{k}_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - \mathbb{k}_2)} \sum_{n_s = \mathbf{n} - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{i_k} = j_{s_a}^{i_k}}^{(l_{s_a} - i_l + 1)} \sum_{(j^{s_a} = j_{s_a})}^{l_i - i_l + 1} \sum_{j_i = j^{s_a} + s - j_{s_a}}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{i_k} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1)}^{(n_i - j_{i_k} - \mathbb{k}_1 + 1)}$$

GÜLDÜNKYA

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_{ik} + j_{sa}^{ik} - k - s + 1)} \sum_{(j^{sa} = j_{sa} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{\binom{()}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_3; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{l}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = \mathbf{n} + \mathbb{k} - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1 \\ n_{ik} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2) \\ (n_{sa} = \mathbf{n} + \mathbb{k}_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - \mathbb{k}_3 \\ n_s = \mathbf{n} - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik}} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}} \sum_{(l_{sa} - i, l+1)} \sum_{(l_i - i, l+1)}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{ik} = \mathbf{n} + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)}$$

GÜLDÜŞMAYA

$$\begin{aligned}
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s + j_{sa} - l_i - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{l_i}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j_{sa})}^{()} \sum_{j_i=s}^{()}$$

$$\sum_{n_i=1}^n \sum_{k_1}^{()} \sum_{k_2}^{()} \sum_{k_3}^{()} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge l_i < n$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - j_{sa}^{ik} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, k_1, j_{sa}^{ik}, j_{sa}^{ik} - 1, k_2, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-lk_2)!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=l}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})}^{l_i-i^{l+1}} \sum_{j_i=j^{sa}+s-j_{sa}}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=l_s-k+1)}$$

$$\sum_{j_{ik}=j_{sa}} \sum_{(j_s=j_{sa})} \sum_{j_i=s}$$

$$\sum_{k=1}^n \sum_{(n_{ik}=j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{sa}-k_2} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge k > 0$$

$$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=i}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})}^{l_i-i^{l+1}} \sum_{j_i=j^{sa}+s-j_{sa}}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

GÜLDENSA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_i} \sum_{j_s=1}^{l_i-k} \sum_{j_{ik}=j_{sa}}^{l_i-k-j_s} \sum_{j_i=s}^{l_i-k-j_s-j_{ik}} \sum_{j_{ik}+j_{sa}-j_{sa} \leq j_i \leq j_i + j_{sa} - j_{sa} \leq j_i \leq n} \frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_i \leq j_i + j_{sa} - j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge k = k_1 + k_2 + k_3 > 0 \wedge$$

$$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, j_{sa}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} - 1 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{l_i-1} \sum_{j_s=2}^{l_i-k-j_{sa}^{ik}+2}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j_{sa}-lk_2)!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{sa}=j_{sa})}^{(l_{sa}-l+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-l+1}
 \end{aligned}$$

GÜLDENWA

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_s} \sum_{j_s=2}^{l_s-k+1}$$

$$\sum_{j_{ik}=j_{sa}}^{n} \sum_{j_i=j_s}^{n-j_{ik}+1}$$

$$\sum_{k=1}^{n} \sum_{j_i=j_s}^{n-j_{ik}+1}$$

$$\sum_{n_{sa}=n_{ik}+j_s-j_{sa}-k_2}^{n} \sum_{n_{sa}+j_s-j_i-k_3}$$

$$\frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge k > 0 \wedge$$

$$j_s < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{l_s-k+1}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{l \binom{D}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-i^{l+1}}
 \end{aligned}$$

GÜLDÜŞMÜŞA

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(\)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(\)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

GÜLDEN

A

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{ik}=j_{sa}} \sum_{j_i=s} \sum_{\mathbb{k}} \sum_{n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2}^{()} \sum_{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \frac{(D + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa})!}{(D + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - 1 \leq D + j_s + s - n - 1 \wedge$$

$$D > l_i \wedge n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-}^{l_{ik}+s-k-j_{sa}^{ik}+1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k-}^{n_{is}+j_s-j_{ik}-k_1} \dots \\
 &\frac{(n_{ik}+j_{ik}-j^{sa}-k_2) \dots (n_{is}-j_i-k_3)}{(n_{sa}=n+k_3-j^{sa}) \dots (n_s=n-j_i+1)} \dots \\
 &\frac{(n_{is}-j_{ik}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{is}-j_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(n_{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_s)! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_{ik}+s-k-j_{sa}^{ik}+2}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{i_1}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-i^{l+1}} \sum_{j_i=l_i+n-D}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \\
& \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - j_i - n - j_i - 1)!}{(n_s - j_i - n - j_i - 1)!} \cdot \\
& \frac{(l_{sa} + j^{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_{sa} + j^{sa} - l_{ik} - j_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
& \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_i + n - D}^{l_{ik} + s - k - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{i_k} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{lk}-k} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{n}{j_{ik}}} \sum_{j^{sa}=l_{sa}+n-D}^{\binom{n}{j^{sa}}} \sum_{j_i=l_i+n-D}^{\binom{n}{j_i}} \\
& \sum_{n_i=n+k}^{\binom{n}{n_i}} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{\binom{n_i-j_{ik}-k_1+1}{n_{ik}}} \\
& \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{n_s=n-j_i+1}^{\binom{n_{sa}+j^{sa}-j_i-k_3}{n_s}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{k}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{D+l_s+s-n-l_i}{j_{ik}-j_{sa}^{ik}+j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \binom{n_i-j_s+1}{n_i-j_s+1} \sum_{n_{ik}=j_s-j_{ik}-l_{k_1}} \binom{n_i-j_s+1}{n_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}-j^{sa}-l_{k_2})} \binom{n_i-j_s+1}{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_i - s - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + j_{sa} \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - l_{k_1} + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa} (l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n}^{l_i-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-k_2)!(n_i-j_s+1)!}{(j_s-k_2)!(n_i-j_s+1)!} \cdot \frac{(n_{is}-k_1-1)!}{(j_{ik}-j_s-k_1)!(n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{ik}-j_{ik}-n_{sa}-j^{sa}-k_2)!(n_i-j_s+1)!} \cdot \frac{(n_{sa}-n_s-1)!}{(n_{sa}-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})!(j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})!(j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1) \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n (n_i-j_s+1) \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_s}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-1)}^{(n_{sa}+j_{sa}-j_i-1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1)! (n_{ik}+j_{ik}-n_{sa}-j_{sa}-k_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{i_s}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{i_k}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1)}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \\
& \sum_{(n_{s_a}=\mathbf{n}+\mathbb{k}_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
& \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
& \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
& \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{()} \sum_{i=1}^{()} \\
& \sum_{j_{i_k}=j_{s_a}^{i_k}}^{(l_{s_a}-i^{l+1})} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{l_i-i^{l+1}} \sum_{j_i=l_i+n-D} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{i_k}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1)}^{(n_i-j_{i_k}-\mathbb{k}_1+1)}
\end{aligned}$$

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_i - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{lk} - j_{sa}}^{(l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{()} \sum_{j_i = j^{sa} + s - j_{sa}}^{()} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{()} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}^{()} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \sum_{z=1}^s S_{j_s, j_{ik}, j_{sa}^{ik}} &= \sum_{k=1}^{i^{L-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\ &\sum_{j_{ik}=j_{sa}^{ik}+1}^{sa+j_{sa}^{ik}-j_{sa}} (l_i+n+j_{sa}-D-s-1) \sum_{(j_{sa}=l_{sa}+n-D)}^{l_i-k+1} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
& \frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{i^{l-1}} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \sum_{j_{sa}=j_{sa}^{ik}+1}^{j^{sa}-j_{sa}^{ik}-j_{sa}} \sum_{j_{ik}=n+l_{sa}-D-s}^{(l_s-s-k)} \\
& \sum_{j_{ik}=n+l_{sa}-D-s}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{sa}-j_s+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l_{ik}-1} (j_s - j_{ik} + 1)$$

$$\sum_{j_{ik}=j_s-1}^{l_s+j_{sa}^{ik}-l_{ik}-1} (j_{sa}=l_s-j_{ik}+1) \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} (j_i - j_{sa} - s + 1)$$

$$\sum_{n_i=n+l_k}^n (n_i - n + l_k + 1) \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{sa}+j_s-j_{ik}-l_{k_1}} (n_{sa} + j_s - j_{ik} - l_{k_1} - n_{ik} + 1)$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$\sum_{(j_{sa}=l_{sa}+k)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{(j_i=n+k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{i_1}+j_{sa}^{i_2}-j_{sa}}^{(l_s+j_{sa}-k)} (j_{sa}^{i_1}=l_i+n+j_{sa}-D-s) j_i=j_{sa}^{i_1}+s-j_{sa}^{i_2}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} n_{i_k}=n_{i_s}+j_{ik}-k_1$$

$$\sum_{(n_{sa}=n_{i_k}+j_{ik}-j_{sa}-k_1)}^{()} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{()}$$

$$\frac{(n_{i_s} - s - k_1 - k_2 - k_3)!}{(n_{i_s} + j_s - n - k_1 - k_2 - k_3)! \cdot (j_{sa}^{i_1})! \cdot (j_{sa}^{i_2})! \cdot (j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{i_1} - 1 \leq j_{ik} \leq n_{sa} + j_{sa}^{i_2} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{i_1} - j_{sa}^{i_2} \leq j_{sa}^{i_1} < j_i + j_{sa} - s \wedge j_{sa}^{i_1} + j_{sa}^{i_2} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{i_k} - j_{sa}^{i_2} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{i_2} - j_{sa} > l_{i_k} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D - n - 1 < l_i \leq D - l_s + s - 1 \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{i_1} = j_{sa}^{i_1} - 1 \wedge j_{sa}^{i_2} = j_{sa}^{i_2} - 1 \wedge j_{sa}^{i_3} = j_{sa}^{i_3} - 1 \wedge$$

$$s: \{j_{sa}^{i_1}, k_1, j_{sa}^{i_2}, \dots, k_2, j_{sa}^{i_3}, k_3, j_{sa}^{i_4}\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}^{i_1}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_i+n+j_{sa}^{lk}-D-s-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{lk}+1)}^{()}
 \end{aligned}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_{sa} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\quad)} \sum_{j_s=1}^{(\quad)} \\
 & \sum_{j_{ik} = j_{sa}^{ik}} \sum_{\substack{(l_{sa} - i^{l+1}) \\ (j^{sa} = l_{sa} + n - D)}} \sum_{\substack{l_i - i^{l+1} \\ j_i = l_i + n - D}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_2 - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_1 - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_1 - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_1}^n \sum_{(n_{is}=n+l_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_{is} - s - l_1 - l_2 - l_3)!}{(n_{is} + j_s - n - l_1 - l_2 - l_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \sum_{z=1}^s S_{j_s, j_{ik}, j_{sa}^{ik}} &= \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\ &\sum_{j_{ik}=j_{sa}^{ik}+1}^{n+j_{sa}^{ik}-D-s-1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!} \cdot \\
 & \frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{i=0}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \\
 & \sum_{j_{ik}=n+l_s-j_{sa}^{ik}-D}^{l_s-j_{ik}-k} \sum_{(j_s=j_{ik}-k+1)} \sum_{l_i-k+1} \\
 & \sum_{i=n+l_k}^{n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDENREINER

$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{j_s} l_i^{(j_s - k)} \cdot \\
& \sum_{i_{ik}=j_{sa}^{ik}}^{l_i - l_{i+1}} \sum_{j_i=l_i+n-D}^{l_i - l_{i+1}} \cdot \\
& \sum_{n_{ik}=n-k}^n \sum_{j_{ik}=j_{ik} - k_1 + 1}^{j_{ik} - k_1 + 1} \cdot \\
& \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \cdot \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_{ik}=j_{sa}+s-j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-l_{k_1}}^{(n_{is}-j_s+1)} \sum_{(n_{ik}+j_{sa}^{ik}-l_{k_2})}^{(n_{is}-j_s+1)} \sum_{(n_{ik}+j_{sa}^{ik}-l_{k_3})}^{(n_{is}-j_s+1)} \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (j_{sa}^s)! \cdot (j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \geq D - n + 1 \wedge$

$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D + s - n < l_s \leq D + j_s + s - n - 1 \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_{z^S} \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (l_i + n - D - s)} \sum_{(j_s=2)}^{(l_{sa}-k+1)} \\
 &\sum_{j_{ik}=j_s + j_{sa}^{ik} - 1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i - k + 1} \sum_{j_i=l_i+n} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+k_3-j^{sa}-1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{ik}+j_{ik}-j^{sa})} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 &\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 &\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=l_i+n-D-s+1)}
 \end{aligned}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-lk_2)!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=l}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(l_{sa}-i+1)}^{(l_{sa}-i+1)} \sum_{j_i=l_i+n-D}^{l_i-i+1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - j_i - \mathbf{n} - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j^{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j^{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!}
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{j_i=1}^{(n-l_i)} \sum_{j_s=1}^{(n-l_i)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(n-l_i)} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
& \sum_{n_i=n+k}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \\
& \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}^{ik}-j_s)} \sum_{(j_i=j^{sa}-j_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_{is} + k_1 + k_2 + k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{j_i = s}^{l_s + s - k} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{j_{ik} - j_{sa} - j_{sa} - j_{ik} + 1} \\
 &\sum_{(n_{ik} + j_{ik} - j^{sa} - j_{sa} - j_{ik} - k_3)}^{(n_{ik} + j_{ik} - j^{sa} - j_{sa} - j_{ik} - k_3)} \sum_{(n_{sa} = n + k_3 - j_{sa} - 1)}^{(n_{sa} = n + k_3 - j_{sa} - 1)} \sum_{n_s = n - j_i} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 &\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{j_i = l_s + s - k + 1}^{l_i - k + 1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{\substack{() \\ (j^{sa} = j_i + j_{sa} - s)}} \sum_{j_i = s}^{l_i - i - l + 1}$$

$$\sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}}$$

$$\sum_{n_{sa} = n + k_3 - j^{sa} + 1} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_{ik}=j_{sa}-j_{sa}}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(l_s+s-k)} \sum_{j_i=s+1}^{(n_i-j_s+1)} \\
 & \sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{(n_i-j_s+1)} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=i}^{(D-l_i)} \sum_{(j_s=1)}^{(D-l_i-k)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \sum_{n_i=n+k} \sum_{(n_{ik}=n_i-j_{ik}-k_1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n_{sa}+j_i-j-k_3)} \frac{(n_i+j_s-s-k_1-k_2-k_3-j_s)!}{(n_i+j_s-n-k_1-k_2-k_3-j_{sa})! \cdot (n-s)!} \cdot (n-l_i)!$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq j^{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_i + j_s - s = j_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{i-1}, j_{sa}^{ik}, \dots, k_2, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$k_2: 2 \leq k_2 \leq 3 \wedge k = k_1 + k_2 + k_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\begin{aligned}
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - k_2)!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_s - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
\end{aligned}$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_s+j_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - l_s - j_{sa} + 1)!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=i}^{\binom{D}{i}} \sum_{l=j_s=1}^{\binom{D}{i}} \\
& \sum_{ik=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{sa}-i)l+1} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - k)} \sum_{(j_{sa} = j_{sa} + 1)}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n_i + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = j_{ik} - k_1)}^{()}$$

$$\sum_{(n_{sa} = n_{ik} + j_{sa} - k_2)}^{()}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} - j_s - n_{ik} - k_1 - k_2 - k_3 - a)! \cdot (n + j_{sa} - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik}} \sum_{(j_{sa} = j_{sa})}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{ik} = n_i - j_{ik} - k_1 + 1)}^{()}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2} \sum_{(n_s = n_{sa} + j_{sa} - j_i - k_3)}^{()}$$

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$$\frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$S: j_{sa}^s, j_i = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

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$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(n_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{j_s=2}^{l-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{l-k+1} \sum_{j_{ik}=j^{sa}+s-j_{sa}}^{l-k+1} \sum_{j_{sa}=n+k-j_s+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \binom{()}{j_s = j_{ik} - j_{sa}^{ik} + 1}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{l_{ik} - i + 1} \binom{()}{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

$$\sum_{j_{sa} = j_{sa}^{ik} - j_{sa}^{ik} + 1}^n \binom{()}{j_{sa} = j_{sa}^{ik} - j_{sa}^{ik} + 1}$$

$$\sum_{j_{sa} = j_{sa}^{ik} - j_{sa}^{ik} + 1}^{n_{ik} + j_{ik} - j_{sa}^{ik} - \mathbb{k}_2} \binom{()}{j_{sa} = j_{sa}^{ik} - j_{sa}^{ik} + 1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - j_s - j_{sa}^{ik} + 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{sa}^{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \binom{()}{j_s = j_{ik} - j_{sa}^{ik} + 1}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - k} \binom{()}{j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}} \sum_{j_i = j_{sa} + s - j_{sa}}$$

GÜLDÜZYAN

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is}-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3)!}{(n_{is}+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)! \cdot (n+j_s-j_s-s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-j_s-1)! \cdot (l_s-2)!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
& \sum_{k=i}^{(\quad)} \sum_{l \binom{(\quad)}{j_s=1}} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
& \frac{(n_i+j_s-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)!}{(n_i+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)! \cdot (n-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=0}^{i^{l-1} (l_s - k)} \sum_{(j_s=2)}^{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-k+1} (j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}) j_i=j_{sa}+j_{sa}^{ik}-j_{sa}$$

$$\sum_{n_i=n_{is}+j_{sa}^{ik}-1}^n (n_{is}=n_{is}+j_{sa}^{ik}-1) n_{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}$$

$$\sum_{(n_{sa}=n_{sa}-j_{sa}+1)}^{(n_{sa}=n_{sa}-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}-1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-j^{sa}-k_2}^{(j^{sa}-k_3)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}}^{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-k_1+1)!}$$

$$\frac{(n_{sa}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-j^{sa}-k_2)!}$$

$$\frac{(n_s-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)} \\
& \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \\
& \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \\
& \sum_{k=i}^{()} \sum_{(j_s=k)} \\
& \sum_{=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \\
& \sum_{=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} \\
& \sum_{sa=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}^{()} \\
& \frac{(l + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(j_{sa}=j_{sa}^{ik}-j_{sa})} \sum_{(j_i=n-D)}^{(l_s+s-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{sa}+k_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik})}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDENYA

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_i - k + 1} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_s + s - k}^{l_i - k + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j_{sa} - 1)}^{(n_{ik} + j_{ik} - j^{sa} - 1)} \sum_{n_s = n - j_i}^{n_{ik} + j_{ik} - j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_i + n - D}^{l_i - i^{l+1}}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - j_i - n - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{sa} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜZÜMÜ

AYNA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{zS}^{j_s, j_i, j_{sa}^i, j_{sa}^{ik}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s + j_{sa} - k)} \sum_{j_{ik}=j_{sa}^{ik} - \mathbb{k}_1 - j_{sa}}^{(j_{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i=j_{sa}^i + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa}=n + \mathbb{k}_3 - j_{sa} + 1)}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \sum_{n_s=n - j_i + 1}^{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!} + \\
 & \sum_{j_s=2}^{i^{l-1} (l_s - k + 1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_i+j_{sa}-s+1)} \sum_{j_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{j_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_i+j_{sa}-i^{l-s+1})} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_s=n+l_3}^n \sum_{n_{ik}=n+l_2}^{n-j_{ik}-k_1+1} \sum_{n_{sa}=n+l_1}^{n+l_2} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_{sa}=n+l_3-j_{sa}+1}^{n_{ik}+j_{ik}-k_2-k_3} \sum_{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_s^s)! \cdot (n + j_s^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$

$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_s^s, \dots, \mathbb{k}_2, j_s^s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1$

$\mathbb{k}_z: z = 1, 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(\)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - k_2)!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_s + j_s - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_s - j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k-s+1}^{l_i+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (l_s - \dots - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - \dots)! \cdot (j_{ik} - \dots - j^{sa} + 1)!} \cdot \\
 & \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=i}^{(\dots)} \sum_{l(j_s=1)}^{(\dots)} \\
 & \sum_{j_{ik}=l_i+\dots}^{l_i+j_{ik}+\dots} \sum_{j_i=j^{sa}+s-j_{sa}}^{(\dots)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{ik}-k} \binom{()}{j_{sa}=j_{sa}^{lk}+j_{sa}-j_{sa}^{lk}}$$

$$\sum_{n_i=n+lk}^n \binom{(n_i-j_s+1)}{n_i=n+lk, n_{sa}=n+lk-j_s, n_{sa}+j_{sa}-n_i=n+lk-j_s-j_{ik}-lk_1}$$

$$\binom{()}{n_{sa}=n_{ik}+j_{sa}-lk_2} \sum_{n_{sa}+j_{sa}-j_i-lk_3}$$

$$\frac{(n_{sa}+j_{sa}-lk_1-lk_2-lk_3)!}{(n_{sa}+j_{sa}-lk_1-lk_2-lk_3-s)! \cdot (n+j_{sa}-j_s-s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{lk} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{lk} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_s + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n \wedge I = lk > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{lk} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, lk_1, j_{sa}^{ik}, \dots, lk_2, j_{sa}, lk_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + lk \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k-lk_1}^{n_{is}+j_s-k-lk_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_s-lk_2)}^{(n_{ik}+j_{ik}-j_s-lk_2)} \sum_{(n_{sa}+j^{sa}-n_s-j_i)}^{n_{sa}+j^{sa}-n_s-j_i}$$

$$\frac{(n_i - n_{is})!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{is} - lk_2 - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-k-s+1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{\substack{n_i=n+l_k \\ (n_{is}=n+l_k-j_s+1) \\ n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}}^{(n_i-j_s+1)} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ (n_{ik}+j_{ik}-j_{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j_{sa}+1)}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{\substack{n_i=n+l_k \\ (n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}}^{(n_i-j_{ik}-l_{k_1}+1)} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l_s - 2k + 1)!}{(l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+n-s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_s+j_{sa}^{lk}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j^{sa})! \cdot (n + j^{sa} - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_z^S j_s, j_{ik}, j_i &= \sum_{k=1}^{l_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{l_s + s - k} \\ &= \sum_{(j_s=2)}^{j_s + 1} \sum_{(j_s=2)}^{l_s + s - k} \\ &= \sum_{(j_s=2)}^{j_s + 1} \sum_{(j_s=2)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &= \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &= \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

GÜLDÜNKYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_s - k + 1} \sum_{j_s=2}^{l_s - k + 1} \dots \\
 & \sum_{j_{ik}=j_{sa} + j_{sa}^{ik}} \sum_{j_{sa}=j_i + j_{sa} - j_{ik}} \sum_{j_i=l_s + s - k + 1} \dots \\
 & \sum_{n_i=n+k}^{(n_i - j_{ik} + 1)} \sum_{n_{is}=n+k - j_s + j_{ik} - k_1} \dots \\
 & \sum_{n_{ik}=n_{sa} - j_{sa} - k_2}^{(n_{ik} - j_{sa} - k_2)} \sum_{n_{sa}=n - j_i + 1} \dots \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{a}+j_{sa}^{ik}-j_{sa}} (j_{sa}^{a}=j_i+j_{sa}-s) \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{sa}+s-i-l-j_{sa}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_k+j_{ik}-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{(n_{ik}=n+l_{k_2}+j_{ik}-j_{ik}+1)} \sum_{n_{sa}=n+l_{k_3}-j_{sa}}^{(j_{sa}^{a}=j_i+j_{sa}-s)} \sum_{(n_s=n-j_i+1)}^{(j_{sa}^{a}=j_i+j_{sa}-s)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!} \cdot \frac{(n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-j_{sa}-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{a}+j_{sa}^{ik}-j_{sa}} (j_{sa}^{a}=j_i+j_{sa}-s) \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{()}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa} \leq j_{sa}^{ik} + j_{sa} - 1$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k_z: z = 3 \wedge k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{j_s=2}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_s+j_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \cdot \\
& \sum_{j_{sa} = j^{sa} + j_{sa}^{lk} - j_{sa}}^{(l_{sa} - l_s + 1)} \sum_{j_{ik} = l_{sa} + n - D}^{(j_{sa} - j_{sa}^{lk} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_s - j_{sa}^{lk} + 1)} \\
& \sum_{n_i = n + k}^{(n_i - j_{ik} - k_1 + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)} \\
& \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)} \sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{(n_i-j_s+1)} \sum_{n_{is}-s-k_1-k_2-k_3}^{(n_i-j_s+1)} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n_{is}+j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j^{sa}+1)}$$

$$\sum_{j_{ik}=l_{sa}+n+j^{ik}_{sa}-D-j_{sa}}^{l_s+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}=n+k_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j^{ik}_{sa}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j^{ik}_{sa}+1)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j^{ik}_{sa}-k+1}^{l_{sa}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\begin{aligned}
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{i_s}+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_{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} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\)} \sum_{(j_s=1)}^{(\)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=\mathbf{l}_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}}^{\mathbf{l}_{sa}+j_{sa}^{ik}-i\mathbf{l}-j_{sa}+1} \sum_{(j_s=1)}^{(\)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ n_{ik}=\mathbf{n}+\mathbb{k}_2+\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}}
 \end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{j_{ik} = l_{sa} - j_{sa}^{ik} - D - j_s}^{l_s - k} \sum_{j_i = n + \mathbb{k}}^{n} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=0}^{i^{l-1}(l_{sa} - j_{sa})} \sum_{(j_s=2)}^{(j_s-1)}$$

$$l_{sa} - k - j_{sa} + 1 \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{(j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}}^{(j_i-1)}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n+k_1+1)}^{(n_i-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_{sa}=j_s+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j_{sa}=j_s+j_{sa}^{ik}-j_{sa})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{sa}+j_s-j_i-\mathbb{k}_3)}^{(n_{sa}+j_s-j_i-\mathbb{k}_3)}$$

$$\sum_{(n_{sa}+j_{sa}-\mathbb{k}_3-j_{sa})}^{(n_{sa}+j_{sa}-\mathbb{k}_3-j_{sa})} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_s - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-j_{sa}-k_2}^{(j_{sa}-j_{sa}^{ik}-k_3)}$$

$$\sum_{n_{sa}=n+k_3-j_{sa}}^{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{sa}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-j_{sa}-k_2)!}$$

$$\frac{(n_s-n_s-1)!}{(j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \binom{(\quad)}{\quad}}{(n_{is} - s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq \dots \leq \dots$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - \dots \wedge j_{sa} = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + \dots \wedge$

$k_z: z = 3 \wedge \dots = k_1 + \dots + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_{ik}+s+n-D-j_{sa}^{ik}} \binom{(\quad)}{\quad} \sum_{l_s+s-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - 1)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{ik} + s - k - j_{sa}^{ik} + 1} \\
 & \sum_{j_{ik}=j^{sa} + j_{sa}^{ik} - j_{sa}}^n \sum_{(j^{sa}=j_i + j_{sa} - s)}^{()} \sum_{j_i=l_s + s - k + 1}^{l_{ik} + s - k - j_{sa}^{ik} + 1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_{ik}=j_i}^{(j_i)} \sum_{j_{sa}^{ik}=j_{sa}-j_{sa}}^{(j_{sa}-j_{sa})} \sum_{j_i=l_{ik}+s+n-D-j_{sa}^{ik}}^{(l_{ik}+s-i-l-j_{sa}^{ik}+1)} \sum_{j_s=1}^{(j_s)}$$

$$\sum_{n_i=n+l_k}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{ik}+n-D-j_{sa}^{ik}}^{l_s+s-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{is}=n_{ik}+j_s-k_2)}^{()} \sum_{(j_i=j_i-k_3)}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n - l_{ik} \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{ik} - 1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j^{sa}_{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j^{ik}_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j^{sa}_{ik} - j_{sa} - j^{ik}_{sa} + j^{sa}_{ik} - j_i - k_3)}$$

$$\sum_{(n_{sa} = n + k_3 - j_{sa} - 1)}^{(n_{ik} + j_{ik} - j^{sa}_{ik} - j_{sa} - j^{ik}_{sa} + j^{sa}_{ik} - j_i - k_3)} \sum_{n_s = n - j_i + j_{sa}}$$

$$\frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{ik}_{sa} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{ik}_{sa} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = l_s + j_{sa} - k + 1)}^{(l_{ik} + j_{sa} - k - j^{ik}_{sa} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})}^{(l_{ik} + j_{sa} - l - j_{sa}^{ik} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)} \\
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)}
 \end{aligned}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{j_{ik} = j^{sa} + s - j_{sa}}^{j_{ik} - j_{sa}^{ik} - j_{sa}} \sum_{j_i = j^{sa} + s - j_{sa}}^{j_i + j_{sa} - D - j_{sa}^{ik}} \sum_{j_s = n + \mathbb{k}}^{n} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} \sum_{i=1}^{l-1} \sum_{(j_s=2)}^{k+1} \frac{l_s + j_{sa}^{ik} - k}{j_{ik} = l_{ik} + n} \frac{(n_i - j_i - 1)}{(n_{is} = n + \mathbb{k}_2 + \mathbb{k}_3 + 1)} \frac{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)}{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1} \frac{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}{(n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1)} \frac{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)}{n_s = n - j_i + 1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_i+j_{sa}-j_{sa}^{ik})} \dots$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=1}^{l_i} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l_i+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+j_{ik}+1)}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(j^{sa}-l_{k_3})}^{(j^{sa}-l_{k_3})}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}}^{(n_{sa}=n+l_{k_3}-j^{sa})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!}$$

$$\frac{(n_{sa}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-j^{sa}-l_{k_2})!}$$

$$\frac{(n_s-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa} \leq j_{sa}^{ik} + j_{sa} - j_{ik} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - j_{sa}^i + 1 \wedge j_{sa} = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k_z: z = 3 \wedge k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^l-1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{k-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_s - 1)!}{(D + j_{sa} - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_s=1}^{(l_s-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_{ik}-i)l_s} \sum_{j_{sa}=n+l_{k_3}-j^{sa}+1}^{(j^{sa}-j_{ik}-j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=n+l_{k_1}}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_{ik}^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{(n_{is}-s-k_1-k_2-k_3)} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (j_{sa}-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i = D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_s + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = \mathbb{k} >$$

$$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} - 1 = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)} \sum_{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j^{sa}-j_i)} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s-k+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_{sa}-k+1)} \sum_{(l_i-k+1)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=l_s+s-k+1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=1}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = s} \frac{(l_{sa} - i^{l+1}) l_{i-1}^{l+1}}{ \\
 & \sum_{n_i = n + k}^n \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (l_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = s+1}^{l_s + s - k} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{()}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\sum_{n_i=n_{ik}+j_{ik}+j_{sa}-\mathbb{k}_2} \sum_{(j_i=j_i-\mathbb{k}_3)} \frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge l_i < n$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq 1 \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_{i-1}}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_{i-1}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-lk_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{\substack{(l_{sa} - l + 1) \\ (j^{sa} = j_{sa})}} \sum_{\substack{l_i - l + 1 \\ j_i = j^{sa} + s - j_{sa}}}$$

$$\sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}}$$

GÜLDÜŞMAYA

GÜLDÜNKYA

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (l_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - k)} \sum_{(j^{sa} = j_{sa} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{()}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=0}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq 1 \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1}(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_s+j_{sa}^{lk}-k} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{lk}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-lk_2-1)!}{(j_{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}-lk_2)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1) \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{lk}-k+1}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{lk}+s-j_{sa}}^{l_i-k+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

GÜLDÜZMAYA

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$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2 - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (l_{ik} - j^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(j_s)} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(j_s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{(j_s)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j_{sa}}^{()} \sum_{j_i=s}^{()}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik} - 1, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_3; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{(n_s=j_i+1)}^{(n_{sa}+j_{sa}-j_i)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j_{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{l_{ik}-l+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-l+1}$$

GÜLDÜSÜZ

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - l_{k_2})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{sa} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(j_{sa}^{ik})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()} \sum_{j_{ik}=j_{sa}} \sum_{j_i=s} \sum_{k=1}^n \sum_{()} (n_{ik} - j_{ik} - k_1 + 1) \sum_{n_{sa}=n_{ik}+j_{sa}-k_2}^{j_{sa}-k_2} \dots \sum_{n_{sa}+j_{sa}-j_i-k_3}^{j_{sa}-k_3} \frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!} \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - 1 \leq D + j_s + s - n - 1 \wedge$$

$$D > n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{zS}^{\mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i}} &= \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik}=j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j_i + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_i + n}^{l_s + s - k} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j^{sa} - j_i - k_3)}^{(n_{ik} - j_s + 1)} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 &\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}
 \end{aligned}$$

GÜLDÜSÜYA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}-1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-k_2)!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\)} \sum_{i=1}^{(j_s=1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i^{l+1})} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}}$$

GÜLDÜZÜMÜ

$$\begin{aligned}
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - j_i - \mathbf{n} - l_i - 1)!}{(n_s - j_i - \mathbf{n} - l_i - j_i)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \\
 & \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+\mathbf{n}-D}^{l_s+s-k} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-k+1} \sum_{j_i=l_i+n-D}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - j^{sa} - s)!}{(j^{sa} + l_i - j_{sa} - j^{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i - j^{sa} - s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}-k)}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i-k+1)} \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{j_i=2}^{l_i-1} \sum_{j_s=2}^{l_s-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_{sa}-s+1} \sum_{j_i=k_1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{j_i=n+k}^{n_{is}+k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{n}{j_s}} \sum_{j_s=1}^{\binom{n}{j_s}}$$

$$\sum_{j_{ik}=j^{sa}} \sum_{j_{sa}=l_{sa}+1} \sum_{j_i=l_i+n-D}$$

$$\sum_{j_i=n+k} \sum_{j_i=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{j_i=n+k_3-j^{sa}+1} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{ik}}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{(\cdot)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_1)}^{(\cdot)} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3)! \cdot (j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D) j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$
 $l_{sa} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$
 $D - n - 1 < l_i \leq D - l_s + s - 1 \wedge$
 $n \geq n < n \wedge I = k > 0 \wedge$
 $j_{sa} = j_{sa}^{i-1} - 1 \wedge j_{sa}^{ik} = j_{sa}^{i-1} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}, k_1, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$
 $s \geq 5 \wedge s = s + k \wedge$
 $k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=\mathbf{l}_{ik}+n-D}^{\mathbf{l}_i+n+j_{sa}^{lk}-D-s-1} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=\mathbf{l}_i+n-D}^{\mathbf{l}_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{sa}-n_{sa}-j_{sa}-k_2)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{lk}+1)}
 \end{aligned}$$

$$\sum_{j_{ik}=\mathbf{l}_i+n+j_{sa}^{lk}-D-s}^{\mathbf{l}_s+j_{sa}^{lk}-k} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}}^{\mathbf{l}_i-k+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k}=l_s+j_{s_a}^{i_k}-k+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{()} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

GÜLDEN

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_s)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_s-k_2)!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+j_{ik}-j_{sa}^{ik}-1)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-k_3} \sum_{(n_s=n-j_i+1)}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+1}^{n} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{(j_i=j_{sa}+s-j_{sa})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \epsilon_Z^S j_s, j_{ik}, j_i &= \sum_{k=1}^l \sum_{(j_s=2)}^{l_i+n-D-s} \\ &\sum_{j_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j_s=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_i)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{l_i - k} \sum_{j_s = l_i + n - D - s}^{l_i - k} \sum_{j_{ik} = j_s + j_{ik} - 1}^{l_{ik} - k + 1} \sum_{j^{sa} = j_s}^{l_i - k + 1} \sum_{j_i = j_s + s - j_{sa}}^{l_i - k + 1} \\
 & \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{is} + 1} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{j_s=l}^{()} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i+1} \frac{(j^{sa} - j_{ik} + j_{sa} - j_s - i - 1)!}{(j^{sa} - j_{ik} + j_{sa} - j_s - i - 1)! \cdot (n - D)}$$

$$\sum_{k_1=0}^n \sum_{k_2=0}^{(n_i - j_{ik} - k_1 + 1)} \sum_{k_3=0}^{(n_{sa} - j_{ik} - k_2 - k_3 + 1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - i - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(l_s-k+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \binom{()}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\binom{()}{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=n_{sa}+j_{sa}-j_i-lk_3}$$

$$\frac{(n_{is} - s - lk_1 - lk_2 - lk_3)}{(n_{is} + j_s - n - lk_1 - lk_2 - lk_3 - j_{sa}^{ik})! \cdot (n + j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D)}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{ik} - j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} - s \geq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l_i = 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{s, lk_1, j_{sa}^{ik}, \dots, lk_2, j_{sa}, lk_3, j_{sa}^i\}$

$s \geq 5 \wedge l_s = s + lk \wedge$

$lk_z: z = 3 \wedge lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{(j_{sa}=j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{()} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{ik}-k_2)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(n_s-n_s-1)!} \cdot \frac{(n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(l_s-k-1)!} \cdot \frac{(l_s-j_s-k+1)! \cdot (j_s-2)!}{(j_s+l_s-j_{ik}-l_{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{ik}-j_{sa}^{ik}+1)!}{(j_{ik}+l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(j_{ik}+l_{sa}+j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} +$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-l_{k_1}-l_{k_2}-l_{k_3}+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}-l_{k_3}} \sum_{(n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i, l_{k_3}, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = l_{k_1} + l_{k_2} + l_{k_3} \wedge$

$l_{k_2}: j_{sa}^i \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=l_s+j_{s_a}-k+1)}^{(l_{s_a}-k+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{j_s=1}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \\
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_{sa}+j^{sa}-j_i-k_3)}^{(n_s=n-j_i+1)}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa} + 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{k=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-l_{k_1}-l_{k_2}-l_{k_3}+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}-l_{k_3}} \sum_{(n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i - 1, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i - l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$l_{k_2} = l_{k_1} + l_{k_3} \wedge l_{k_1} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(l_{sa}-k+1)} \sum_{j_i=j_{sa}^i+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k}=l_s+j_{s_a}^{i_k}-k+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{(l_{s_a}-k+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{ik}-k_2)!} \cdot \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_{sa}^{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}+j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{k=j_{sa}^{ik}+1}^{j_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-l_{k_1}+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i) \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$l_{k_2}: \dots \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{()}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_s + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{(\cdot)} \sum_{l=(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\frac{\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (j_{ik} - j_{sa})!} \cdot \frac{(l_s + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq 1 \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D - l_s + s - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{i_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=i}^{()} \sum_{l \binom{()}{j_s=1}} \\
 & \sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-i^{l+1}} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{ik} + 1)! \cdot (j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_s + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{ik} - j_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - k} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{sa})! \cdot (n + j^{sa} - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

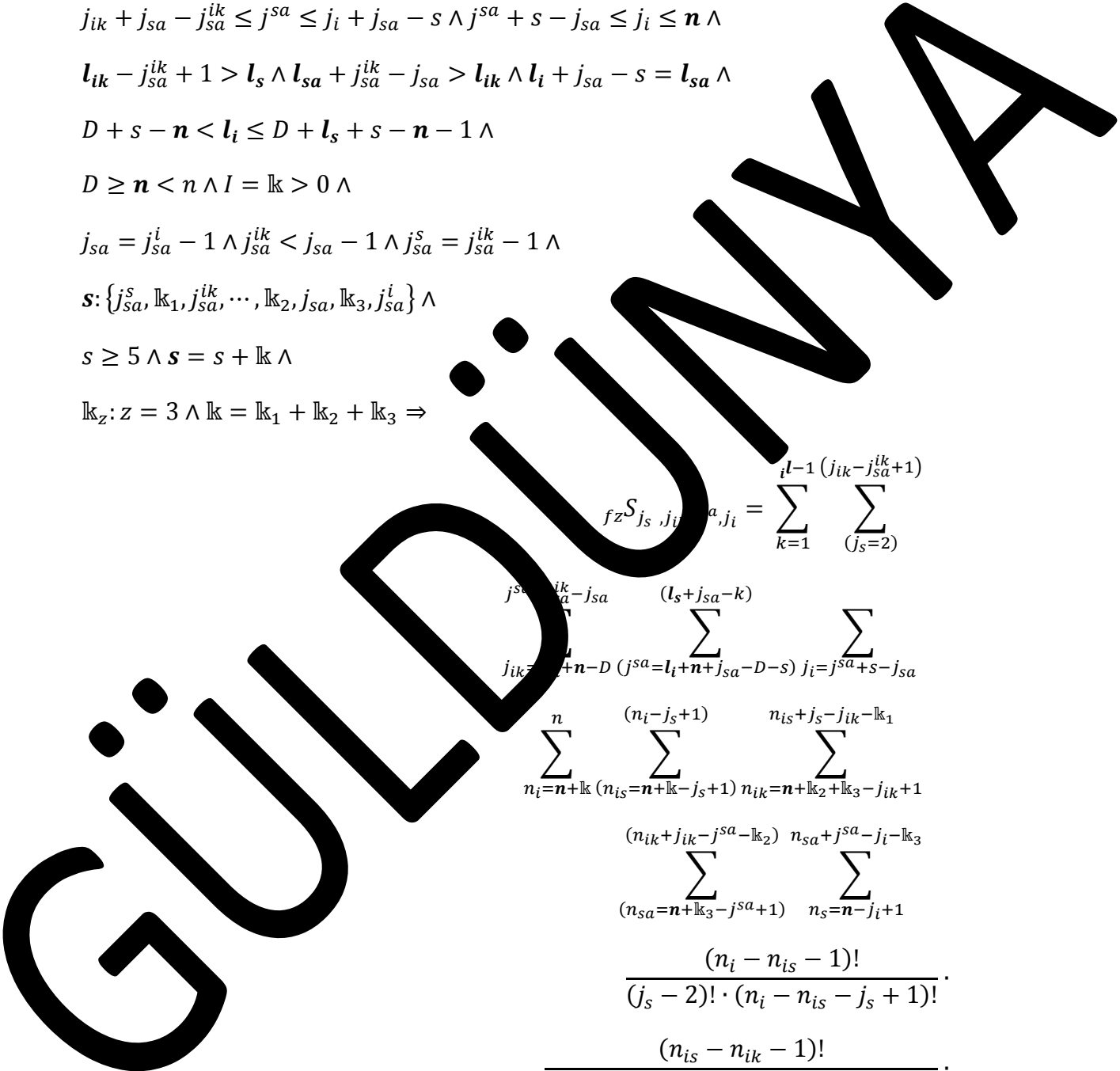
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_i}^{a, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s + j_{sa} - k)} \sum_{j_{ik} = \dots + n - D}^{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{i_s} = n + \mathbb{k} - j_s + 1}^{(n_{i_s} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$



$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_s)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{i_s - k + 1} \sum_{(j_s=2)}^{i_s - k + 1} \\
& \sum_{k=l_{ik}+1}^{i_s - k + 1} \sum_{l_s=j_{sa}-k+1}^{(l_i + j_s - k - s + 1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{i_s - k + 1} \\
& \sum_{n_{is}=n+l_{ik}-j_s+1}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(j_s)} \binom{(\cdot)}{j_s}$$

$$\sum_{j_{ik}=l_{ik}+n-1}^{l_{ik}-j_{i+1}} \sum_{j_{sa}=l_i+n-1}^{j_{sa}+n-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{D-s}$$

$$\sum_{n_i=n-k}^{n} \sum_{j_{ik}-k_1+1}^{j_{ik}-k_1+1} (n_{ik}=n+k_2+k_3-j_{ik}+1)$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

GÜLDÜMNYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_{ik}=j_{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)} \sum_{(n_{sa}-j_i-k_3)} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n_{sa}-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n - l_i \leq D + l_i + s - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - 1, j_{sa}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j^{sa}_{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j^{sa}_{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-1}^{(j_{ik}+j^{sa}-k-s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}-1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_{ik}-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa}_{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{sa}_{ik} + 1)!}$$

$$\frac{(l_{sa} + j^{sa}_{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j^{sa}_{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (j_{ik} - j^{sa}_{ik} + 1)} \sum_{(j_s=2)}$$

GÜLDÜZÜM

$$\begin{aligned}
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - k} \sum_{(l_i + j_{sa} - k - s + 1)}^{(l_i + j_{sa} - k - s + 1)} \sum_{j_i = j_{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_i = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_i}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s = j_i + 1}^{n_{sa} + j_{sa} - j_i - 1} \\
 & \frac{(n_i - 1)!}{(j_s - 2)! (n_i - n_{is} - 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i - j_{sa} - 1)! (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}
 \end{aligned}$$

$$\sum_{j_{ik} = l_s + j_{sa}^{ik} - k + 1}^{l_{ik} - k + 1} \sum_{(l_i + j_{sa} - k - s + 1)}^{(l_i + j_{sa} - k - s + 1)} \sum_{j_i = j_{sa} + s - j_{sa}}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-l+1} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(l_i+j_{s_a}-l-s+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

$$\begin{aligned}
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l_s - j^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j^{ik} + 1)! \cdot (j_{ik} - j^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{()} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{()} \\
 & \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜNKYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_{zS}^{j_s, j_i, a, j_i} &= \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\ & \sum_{j_{ik}=i-k+1}^{i-k+1} \sum_{(l_i+j_{sa}-k-s+1)}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_i=j^{sa}+s-j_{sa})} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_s - j_{sa})!} \cdot \\
 & \frac{(D - j_i - n + l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_s - k + 1} \sum_{j_s = s + 1}^{(l_s - k + 1)} \\
 & \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{l_{ik} - k + 1} \sum_{(j^{sa} - j_{sa}^{ik} + j_{sa} - j_{sa}^{ik})}^{(l_i + j_{sa} - s + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_{ik} = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_{ik})} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDENMYA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(j_s)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i+1} \sum_{(l_i+j_{sa}-j_{sa}+1)} \sum_{(n_i-1)}$$

$$\sum_{(n_i-1)} \sum_{(n_i-1)}$$

$$\sum_{(n_s=n-j_i+1)} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZÜM YAYINLARI

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\)} \sum_{j_i=j^{sa}+s-j}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-lk_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-1)}^{(\)} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_{is}-s-lk_2-lk_3)!}{(n_{is}+j_s-n-lk_1-lk_2-lk_3-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-lk_1+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$lk_1 - j_{sa}^{ik} + 1 \leq lk_2 \wedge l_{sa} - j_{sa}^{ik} - j_{sa} \geq lk_3 \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D - j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n - 1 \wedge I = lk > 0$

$j_{sa} = j_{sa}^i - 1, j_{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{s_{sa}, lk_1, j_{sa}^{ik}, \dots, lk_2, j_{sa}, lk_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s_{sa} = s + lk \wedge$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{\quad} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{i_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-l_{k_2}-1)}{(j^{sa}-j_{ik}-1) \cdot (n_{ik}+j_s-n_{sa}-j^{sa}-l_{k_2})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1} (l_s-k+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=l_s+s-k+1}^{l_{sa}+s-k-j_{sa}+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{\binom{()}{}} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-i^{l+1}} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{\binom{()}{}} \sum_{j_i=l_{s_a}+n+s-D-j_{s_a}}^{l_{s_a}+s-i^l-j_{s_a}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - 1)! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_s - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_s - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_{sa} + n + s - D - j_{sa}}^{l_s + s - k} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_i}^{a, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(l_s + j_{sa} - k)}^{(l_{ik} + n - D) (j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + s - j_{sa}}^{n} \sum_{(n_i = n + \mathbb{k})}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \sum_{n_s = n - j_i + 1}^{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_s)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)!} \cdot \\
 & \sum_{k=1}^{i - j_s - k + 1} \sum_{(j_s=2)}^{i - k + 1} \\
 & \sum_{k=l_{ik}+n}^{i-k+1} \sum_{k=l_s+j_{sa}-k+1}^{i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{i-k+1} \\
 & \sum_{n+l_k}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_s+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{j_s} \binom{(\quad)}{(\quad)} \\
 & \sum_{j_{ik}=l_{ik}}^{l_{ik}-i+l} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j^{sa}+s-j_{sa})+1} \sum_{j_{ik}-k_1+1}^{n} \sum_{n_i=n-k}^{n-k} (n_{ik}=n+k_2+k_3-j_{ik}+1) \\
 & \sum_{j_{ik}-j^{sa}-k_2}^{j_{ik}-j^{sa}-k_2} (n_{sa}+j^{sa}-j_i-k_3) \\
 & \sum_{n_{sa}=n+k_3-j^{sa}+1} \sum_{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_{sa}+n-D)}^{(j_{sa}+s-j_{sa})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{(n_{is}=n_{ik}+j_s-k_2)} \sum_{(j_{sa}=n_{ik}+j_s-k_3)}^{(j_{sa}-j_i-k_3)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j^{sa}_{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{sa} + n + j^{ik}_{sa} - D - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - k + 1)} \sum_{j_i = j^{sa} + s - 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{j_{ik} - j_{ik} + 1}$$

$$\sum_{(n_{sa} = n + k_3 - j_{sa} - 1)}^{(n_{ik} + j_{ik} - j^{sa}_{ik} - j_{sa} - 1)} \sum_{n_s = n - j_i + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{ik}_{sa} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{ik}_{sa} + 1)!}$$

$$\frac{(l_{sa} + j^{ik}_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j^{ik}_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (j_{ik} - j^{sa}_{ik} + 1)} \sum_{(j_s=2)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-k_2-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_{sa}-n_{sa}-j_{sa}-k_2)!} \cdot \\
 & \frac{(n_s-1)!}{(n_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})!(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}(l_s-k+1)} \sum_{(j_s=2)}
 \end{aligned}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a} - l_{k_2})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{s_a} + j_{i_k} - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{\binom{()}{}} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-i+1} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_{s_a}-i+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

GÜLDEN

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{ik} + 1)! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_s - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_s - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{i_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()} \sum_{j_i = j^{sa} + s - j_{sa}}^{()} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{()} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}^{()} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \epsilon_z S_{j_s, j_{ik}, j_{sa}^s} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \\ &\sum_{ik=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_s - j_{sa})!} \cdot \\
 & \frac{(D - j_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \frac{(l_s - k - 1)!}{(j_s - l_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{l_{ik} - k + 1} \frac{(l_{sa} - k - 1)!}{(j^{sa} + j_{sa}^{ik} - j_s - j_{sa} - j_{sa}^{ik})!} \cdot \sum_{j_i = j^{sa} + s - j_{sa}}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{n_{is} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + k} \frac{(n_i - j_{ik} - k_1)!}{(n_{is} = n + k_2 + k_3 - j_{ik} + 1)!} \cdot \sum_{n_{is} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \frac{(n_{sa} + j^{sa} - j_i - k_3)!}{(n_s = n - j_i + 1)!} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(j_s)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+1}^{l_{ik}-i+1} \sum_{(l_{sa}+j_{sa}^{ik}+1)} \sum_{(j_{sa}+s-j_{sa})}$$

$$\sum_{(n_i-1)} \sum_{(n+n+k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}+j_{sa}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(k_3-j_{sa}+1)} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

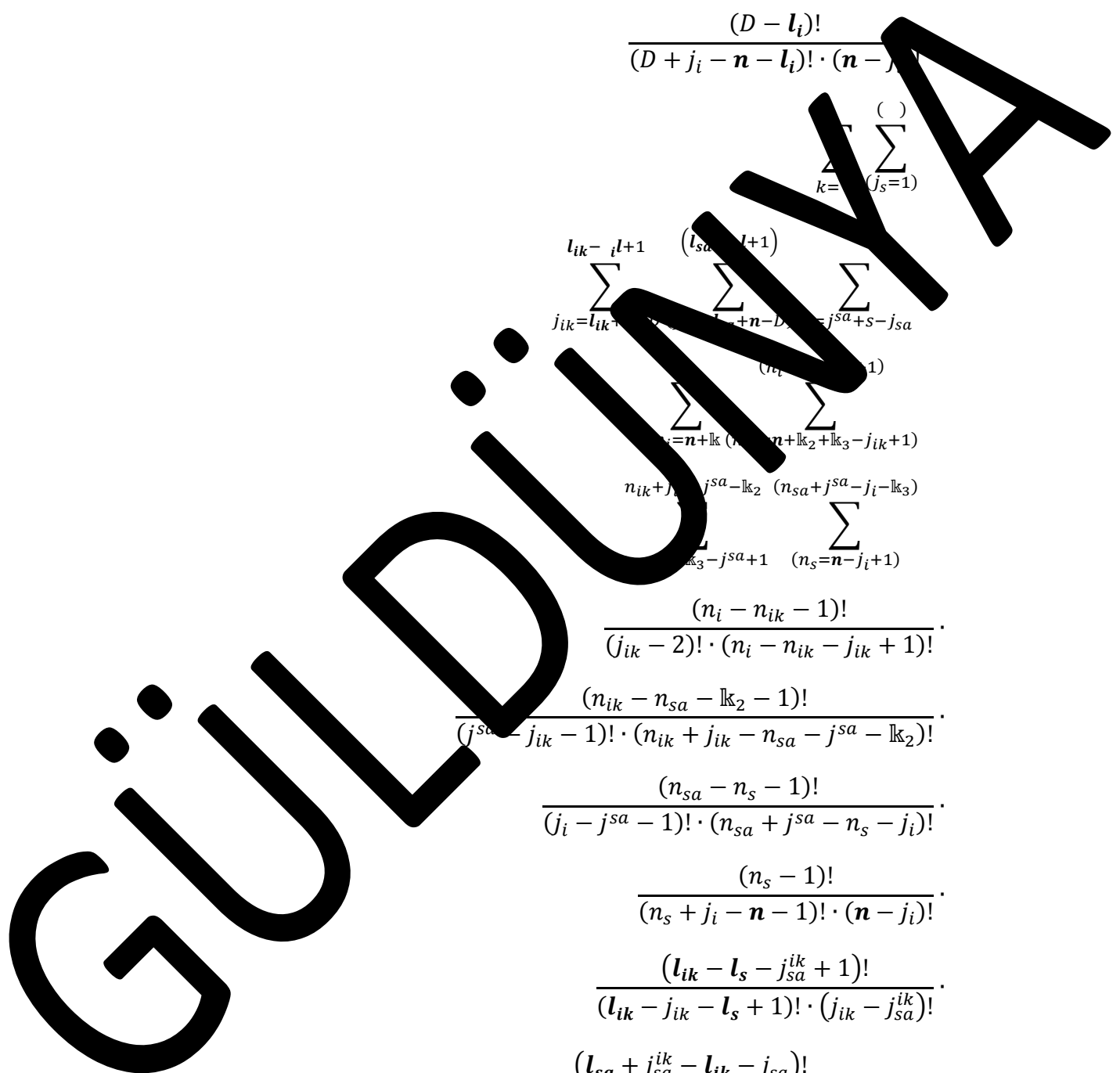
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\cdot)}$$

$$\sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-1)}^{(\cdot)} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_{is}-s-j_{sa}-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$((D \geq n < n \wedge l_i \leq D + \dots - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq \dots - n + 1$$

$$\leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} + 1 > l_s \wedge$$

$$l_i \leq D + \dots - n)) \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk-k-lk_1}^{n_{is}+j_s-k-lk_1} \sum_{(n_{ik}+j_{ik}-n_{sa}+j^{sa}-lk_2)}^{n_{sa}+j^{sa}-j_i-lk_2}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - lk_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{(l_s - k + 1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}+j_{ik}-l_{k_1})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_{ik}-1)! \cdot (n_s=n-j_i+1)!} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{ik} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDÜZÜMÜSÜ

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$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \sum_{j_i=1}^{l_{i-1}^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n+k_3-j^{sa})} \sum_{(n_s=n-j_i+1)}^{(j_{sa}-k_3)}$$

$$\frac{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!}{(n_{ik}-n_{sa}-1)!} \cdot \frac{(n_{ik}+j_{ik}-n_{sa}-j^{sa}-k_2)!}{(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=i}^{(\quad)} l_i^{(j_s=1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
 & \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$((D \geq n < n) \wedge l_i \leq D + s - n \wedge$$

$$1 - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{i-l} \sum_{(j_s=2)}^{j_{ik}-j_{sa}^{ik}+1} S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{j_{sa}+j_{sa}^{ik}} \sum_{(l_s+j_{sa})}^{(l_i-j_s+1)} \sum_{(j_i=j_{sa}+s-j_{sa})}^{l_i-k+1} \\ & \sum_{(j_{ik}=j_{sa}^{ik}+1)}^{n} \sum_{(n_i-j_s+1)}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{n} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{j_s=2}^{l_s-k+1} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k} \sum_{j_i=j_{sa}+s-j_{sa}}^{(l_{sa}-1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - l_{k_2})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^l \binom{()}{j_s = \dots}$$

$$\sum_{j_{ik}=j_s}^{l_{ik}-i+l+1} \sum_{j_i=j_{ik}}^{(l_{sa}-j_{sa}^{ik})-i+l+1} \dots$$

$$\sum_{n_{ik}=n-k}^{j_{ik}-k_1+1} \dots$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

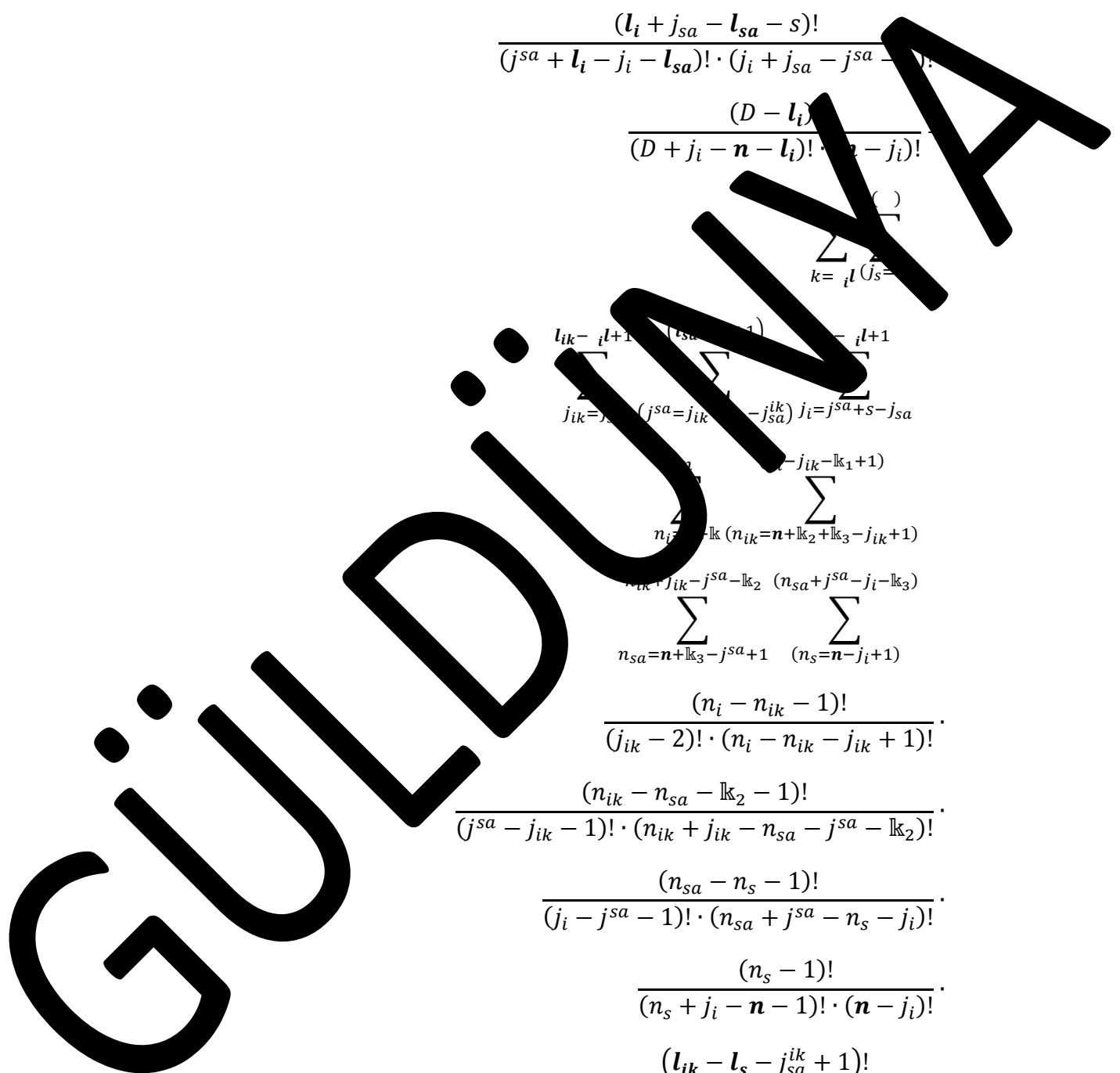
$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$



$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j^{sa}+j_{sa}^{ik}-j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_i-j_{ik}-k_1)}^{()}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}^{()}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_i - j_s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=s}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}^{()}$$

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$$\frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k}$$

$$\mathbb{k} = z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^i, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}^i+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}^i+1)}^{(n_{ik}+j_{ik}-j_{sa}^i-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^i-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2 - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s - 1)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{sa} - s)!}{(j_s + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{l(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-i+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

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$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} - 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (i + j_i - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{k=j_{sa}^{ik}+1}^{j_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜZ

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D}{l}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{D}{l}} \sum_{(j^{sa}=j_{sa})}^{\binom{D}{l}} \sum_{j_{sa}^{ik}}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-l-k_1+1)}^{\binom{D}{l}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{\binom{D}{l}} \sum_{(n_{sa}+j^{sa}-j_i)}^{\binom{D}{l}}$$

$$\frac{(n_i + j_s - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge l_{sa} - j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D + s - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_{sa} \wedge$$

$$l_i \leq (s - n)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{(l_s - k + 1)} \\
 &\sum_{j_{ik}=j_s + j_{sa}^{ik} - 1}^{l_{ik} - k + 1} \sum_{(j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)} \sum_{j_i=j^{sa} + s - 1}^{l_i - k + 1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa}-k_1-1)! \cdot (n_{is}+j_s-j_{ik}-k_3)!}{(n_{sa}=n+k_3-j_{sa}-1)! \cdot (n_s=n-j_i+1)!} \cdot \frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_s - j_s + 1)!} \\
 &\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa} - k_2)!} \\
 &\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 &\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(j_{sa}-k_3)}$$

$$\frac{(n_{ik}-j_{ik}-1)!}{(j_{ik}-1) \cdot (n_i-j_{ik}-1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-j^{sa}-k_2)!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

GÜLDENWASSER

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l_i}^{(\quad)} \sum_{j_s=1}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\quad)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
 & \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$((D \geq n < l_i) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & f_z = \sum_{i=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\ & \sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\ & \sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - \mathbb{k}_2)!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
& \frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{j_{ik}=l_{ik}+n-l_{sa}}^{l_{ik}-l_{sa}+1} \sum_{j_{sa}=l_{sa}+n-D}^{(l_{sa}-l_{sa}+1)} \sum_{j_i=l_i+n-D}^{l_i-l_{sa}+1} \sum_{n_i=n+l_{ik}}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)} \\
& \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{j_s=j_{ik}+j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1} \binom{D+l_s+s-n-l_i}{j_{sa}^{ik}+1} \sum_{j_i=l_i+n-D} \binom{D+l_s+s-n-l_i}{j_i+l_i+n-D}$$

$$\sum_{n_i=n+l_k} \binom{D+l_s+s-n-l_i}{n_i+l_k} \sum_{n_i=n+l_k-j_s} \binom{D+l_s+s-n-l_i}{n_i+l_k-j_s} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \binom{D+l_s+s-n-l_i}{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{n_i=n+l_k} \binom{D+l_s+s-n-l_i}{n_i+l_k} \sum_{n_i=n+l_k-j_s} \binom{D+l_s+s-n-l_i}{n_i+l_k-j_s} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_2} \binom{D+l_s+s-n-l_i}{n_{ik}=n_{is}+j_s-j_{ik}-k_2} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i-k_3} \binom{D+l_s+s-n-l_i}{n_s=n_{sa}+j_{sa}^{ik}-j_i-k_3}$$

$$\frac{(n_{is} + j_{sa}^{ik} - n - k_1 - k_2 - k_3 - j_{sa})!}{(n_{is} + j_{sa}^{ik} - n - k_1 - k_2 - k_3 - j_{sa})! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n \wedge n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}, j_i \sum_{i=1}^{i-1} \sum_{(j_s=2)}^{(k+1)}$$

$$j_{sa}^s + j_{sa}^{ik} - j_{sa} - n + j_{sa} - 1) \sum_{j_{ik}=l_{ik}+n-D}^{(j_{sa}=n-D)} \sum_{j_i=l_i+n-D}^{(i-k+1)}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n+\mathbb{k}_3+1)}^{(n_i-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{j_{sa}=l_i+n}^{(l_s - j_{sa}^{ik} + 1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_i - k + 1)}$$

$$\sum_{n_i=n-k}^n \sum_{(n_{is}=n+k_1+1)}^{(n_{is}+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{ik}+1)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s+j_s-j_{ik}-k_1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{j_s-1} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}-k+1)}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_{i_s}=n+k_1}^n \sum_{(n_{i_s}=n+k_1-1)}^{(n_{i_s}+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-k_3}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{ik})!}$$

$$\frac{(n_{i_k} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^l (j_s - k)$$

$$\sum_{j_{ik}=i+n-D}^{l_{ik}-l} \sum_{j_i=i+n-D}^{l_i-l+1} \sum_{j_{sa}=i+n-D}^{l_{sa}+n-D}$$

$$\sum_{n_i=i-k}^n \sum_{j_{ik}=i-k_1+1}^{j_{ik}-k_1+1} (n_{ik}=n+k_2+k_3-j_{ik}+1)$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{(\quad)}{(j_s = j_{ik} - j_{sa}^{ik} + \dots)}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{lk} - j_{sa}}^{(l_s + j_{sa} - k)} \binom{(\quad)}{(j^{sa} = l_i + n + j_{sa} - \dots)}$$

$$\sum_{n_i = n + k}^n \binom{(n_i - j_s + 1)}{(n_i = \dots)}$$

$$\binom{(\quad)}{(n_{sa} = n_{ik} - j^{sa} - k_2 = n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(\dots - s - k_1 - \dots - k_3)!}{(n_{is} - k_1 - \dots - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - k + 1 > l_s - j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1) \vee$$

$$D > n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{l-1} \binom{j_{sa}^{ik}+1}{j_s} \binom{l-1}{j_{sa}^{ik}+1} \binom{l_i+n+j_{sa}^{ik}-s-1}{j_{ik}+n-D} \binom{l_{sa}-n}{j_{sa}+n-D} \binom{l_i-k+1}{j_{sa}+n-D} \binom{n}{n+k} \binom{n_i-j_s+1}{n_{is}=n+k_1+1} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{ik}=n+k_2+k_3-j_{ik}+1} \binom{(n_{ik}+j_{sa}-k_2)}{(n_{sa}=n+k_3-j_{sa}+1)} \binom{n_{sa}+j_{sa}-j_i-k_3}{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!} \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{s=2}^{k-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_s+j_{sa}^{ik}-k} \sum_{j_{ik}+j_{sa}-j_{sa}^{ik}}^{(l_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{j_i}$$

$$\sum_{n_i=n+k}^{(n_i+1)} \sum_{(n_{is}+k-j_s+1)}^{(n_i+1)} \sum_{n=n+k_2+k_3-j_{ik}+1}^{n-k_1}$$

$$\sum_{(n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{n_{sa}+j_{sa}-j_i-k_3} \sum_{(n_{sa}-k_3-j_{sa}+1)}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_s-k+1} \sum_{i_s=2}^{l_s-k+1}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{lk}-k}^{l_{ik}-k+1} \sum_{j_{ik}=j_{ik}+j_{sa}-j_s}^{(l_s-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^{n_i+l_k+1} \sum_{n_i+l_k-j_s+1}^{(n_i+l_k+1)} \sum_{n_i+l_k+1-k_1}^{n_i+l_k+1-k_1}$$

$$\sum_{(n_{ik}-j^{sa}-k_2)}^{(n_{ik}-j^{sa}-k_2)} \sum_{n_{sa}+j^{sa}-j_i-k_3}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \binom{()}{j_s=1}$$

$$\sum_{j_{ik}=l_{ik}-i+1}^{l_{ik}-i+1} \sum_{j_i=l_i+n-D}^{l_i+n-D} \sum_{j_{sa}=l_{sa}+i-1}^{l_i-1}$$

$$\sum_{n_i=n+l_k}^{n+l_k} \sum_{n_i=n+l_k+l_{k_2}-j_{ik}+1}^{n+l_k+l_{k_2}-j_{ik}+1}$$

$$\sum_{n_{sa}=n-l_{k_2}-j_{sa}+1}^{n_{sa}+j_{sa}-j_i-l_{k_2}} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - k_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - k_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

GÜLDENWALD

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{sa}^{ik}}^{()} \sum_{(n_{ik}+j_{sa}^{ik}-l_{k_2}-l_{k_3})}^{()} \frac{(n_{is}-s-l_{k_2}-l_{k_3})!}{(n_{is}+j_s-n-l_{k_1}-l_{k_2}-l_{k_3})! \cdot (j_{sa}^s)! \cdot (j_{sa}-j_s-s)!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\ & D + s - n < l_i \leq D + l_s + s - n - 1) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_i - s + 1 > l_s \wedge \\ & D + s - n < l_i \leq D + l_s + s - n - 1) \wedge \\ & D \geq n < n \wedge l = k > 0 \wedge \end{aligned}$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{j_s=2}^{(l_i+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{j_i=l_i-n-D}^{(l_s-k+1)k+1}$$

$$\sum_{n_i=n}^n \sum_{n_{is}=n+(j_i+1)}^{(i+1)} \sum_{n_{ik}=n-j_{ik}+1}^{(j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{n_{sa}=n-(\mathbb{k}_3-j_{sa}+1)}^{(j_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - \mathbb{k}_2 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - \mathbb{k}_2)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{(j_i=j_{sa}-j_{sa}^{ik})}^{(l_i-k+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{sa}^{ik})}^{n_{is}+j_s-j_{ik}-l_{sa}^{ik}} \\
 & \sum_{(n_{ik}+j_{sa}-l_{k_2})}^{(n_{ik}+j_{sa}-l_{k_2})} \sum_{(n_{is}=n+l_{k_3}-j_{ik}+1)}^{n_{is}=n+l_{k_3}-j_{ik}+1} \\
 & \sum_{(n_s=n+l_{k_3}-j_{ik}+1)}^{n_s=n+l_{k_3}-j_{ik}+1} \sum_{(n_s=n-j_i+1)}^{n_s=n-j_i+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_{k_2})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+1}^n \sum_{n_{ik}=n+l_{k_2}+l_{k_3}+j_{ik}-1}^{(n_i-j_{ik}-1)}$$

$$\sum_{n_{sa}=n-j_{sa}+1}^{n_i+j_{ik}-j_{sa}-l_{k_2}-l_{k_3}+j_{sa}-j_i-l_{k_3}}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - l_{k_2} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j_{sa} - l_{k_2})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

GÜLDENWA

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{\binom{()}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}}} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_i=j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}} \sum_{n_s=n_{sa}+j_s-j_i-l_{k_3}}$$

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{lk})! \cdot (n + j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D)}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜMÜŞA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{j_s=j_i}^{(j_s)} \sum_{j_{sa}=j_{sa}+1}^{(j_{sa})} \sum_{j_{ik}=j^{sa}+j_{sa}}^{(j_{ik})} \sum_{j_{ik_1}=j_{ik}-k-s+2}^{(j_{ik_1})} \sum_{n_i=n+l_k}^{(n_i)} \sum_{n_{is}=n+l_k-j_s}^{(n_{is})} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{(n_{ik})} \sum_{n_{sa}=n+l_k+l_{k_3}-j^{sa}+1}^{(n_{sa})} \sum_{n_s=n-j_i+1}^{(n_s)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDÜZYA

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$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=1}^{l_i - i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n+k_3-j_{sa}} \sum_{(n_s=n-j_i+1)}^{(j^{sa}-j_{ik}-k_2+j_{sa}-k_3)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{sa}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(l_i+j_{sa}-j_i-l_{sa})! \cdot (j_i-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_{sa}+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \cdot \sum_{k=i}^{()} \sum_{j_s=s}^{()} \sum_{j_{sa}^s=j_{sa}^s}^{()} \sum_{j_i=s}^{()} \sum_{n+kk}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)} \frac{(l_i + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + 1 - n \wedge$$

$$1 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - 1 \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}{j^{sa}=j_{sa}+1} \binom{l_i-k+1}{j_i=l_{ik}+j_{sa}^{ik}-k-s+2} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{()}{j_s=1}} \sum_{l=1}^{\binom{()}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=j_{sa}}^{\binom{()}{j_s=1}} \sum_{j_i=s}^{l_i-l+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - j_i - n + 1)! \cdot (n - j_i)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(l_i - j_{sa} - l_s - s)! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{(j_s=j_{sa}+j_{sa}^{ik}-j_{sa})}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_{ik}+j_{sa}^{ik}-k-s+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik} \binom{()}{j^{sa}=j_{sa}}} \sum_{j_i}$$

$$\sum_{n_i=n+l \binom{()}{n_{ik}=n_i-l-k_1+1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i + j_s - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - k - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k_1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = k_1 + k_2 \wedge$$

$$k_2: k_2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_{s+s-k}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_i + j^{s_a} - n_{s_a} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{l-1} \sum_{(j_s = j_{i_k} - j_{s_a} + 1)}^{()}$$

$$\sum_{j_{i_k} = j^{s_a} + j_{s_a}^{i_k} - j_{s_a}}^{(l_s + j_{s_a} - k)} \sum_{(j^{s_a} = j_{s_a} + 1)}^{l_i - k + 1} \sum_{j_i = l_s + s - k + 1}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + n - l_{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=i}^{(\cdot)} \sum_{l \in J_s=1}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=j_{sa}}^{(\cdot)} \sum_{j_i=s}^{l_i - l + 1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=j_{sa}^{(k)}}^{(j_{sa}^{(k)}+1)}$$

$$\sum_{j_{ik}=i^{(k)}-j_{sa}^{(k)}} \sum_{j_i=s+1}^{(j_i-s-k)}$$

$$\sum_{n_i=n+k_1} \sum_{n_i=n+k_2-j_s} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-k_2)} \sum_{n_s=n_{sa}+j_s-j_i-k_3}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(i)} \sum_{j_s=1}^{(j_s)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}^{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(i)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa} \geq l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{\binom{(l_{sa}-k+1)}{j^{sa}=j_{sa}+1}} \sum_{\binom{l_i-k+1}{j_i=j^{sa}+s-j_{sa}}} \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1}} \sum_{\binom{n_{is}+j_s-j_{ik}-\mathbb{k}_1}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}} \sum_{\binom{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
 & \frac{(n - l_i)!}{(n - j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=i}^{\binom{()}{}} \sum_{l \mid (j_s=1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}^{l_i - i + 1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{(l_{sa}-k+1)} \sum_{(j_{sa}^{sa}=j_{sa}^{sa}+1)} \sum_{j_i^{sa}=j_{sa}^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}^{ik}} \\
 & \sum_{(n_{is}=n_{ik}+j_{ik}^{ik}-j_{sa}^{sa}-l_{k_2})}^{()} \sum_{j_i=l_{k_3}} \\
 & \frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n_i + j_{sa} - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}^{sa}=j_{sa}^{sa})}^{()} \sum_{j_i=s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}^{ik}-l_{k_1}+1)}^{()} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}^{ik}-j_{sa}^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j_{sa}^{sa}-j_i-l_{k_3})}^{()} \\
 & \frac{(n_i + j_s - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n - s)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+j_{sa}-j_{sa}}^{(j_{sa}^{ik}-k-s+1)} \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}^{ik}-k-s+1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+s-} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} n_{ik}=n_{is}+j_{ik}-k_1 \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j_{sa}-j_i-k_3)} \\
 & \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n_{is}-j_s-s)!} \\
 & \frac{(n_{is}-j_s-k_1-k_2-k_3-j_{sa}^s-k-1)!}{(n_{is}-j_s-k_1-k_2-k_3-j_{sa}^s+1)! \cdot (j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+l_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})}^{()} \sum_{j_i=s} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2} \sum_{(n_s=n_{sa}+j_{sa}-j_i-k_3)}^{()} \\
 & \frac{(n_i+j_s-s-k_1-k_2-k_3-j_{sa}^s)!}{(n_i+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n-s)!} \\
 & \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_s=1}^{j_s} \sum_{j_{ik}=j_s}^{j_{ik}} \sum_{j_{sa}=j_{ik}-j_s}^{j_{sa}} \sum_{j_i=j_{sa}+s-j_s}^{j_i} \sum_{l_i=j_{sa}-s+j_s}^{l_i} \sum_{l_{sa}=j_{sa}-j_{sa}^{ik}+1}^{l_{sa}} \sum_{n_s=j_{sa}-j_{sa}^{ik}+1}^{n_s} \sum_{n_{ik}=n_s+k_2+k_3-j_{ik}+1}^{n_{ik}} \sum_{n_{is}=n_s+k_1-j_s+1}^{n_{is}} \sum_{n_{sa}=n_s+k_3-j_{sa}+1}^{n_{sa}} \sum_{n_i=n_{is}+j_s-j_{ik}-k_1}^{n_i} \sum_{n_{sa}+j_{sa}-j_i-k_3}^{n_{sa}} \sum_{n_{ik}+j_{ik}-j_{sa}-k_2}^{n_{ik}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_i=j_{sa}^{ik}}^{()} \sum_{(j_s=1)}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{n_{sa}=n_{sa}+k_3-j^{sa}}^n \sum_{(n_i-j_{ik}-k_1+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}-j_i-k_2)}^{(n_{sa}-j_i-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=i}^{(\quad)} \sum_{l \binom{j_s=1}{} } \\
 & \sum_{j_{ik} = j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa} = j_{sa})}^{(\quad)} \sum_{j_i = s} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(\quad)} \\
 & \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}^{(\quad)} \sum_{(n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}^{(\quad)} \\
 & \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{i-1} \sum_{(j_s = -j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{sa} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j_{sa} = j_{ik} + j_{sa}^{ik})}^{()} \sum_{j_i = j_{sa} + s}^{l_i + 1}$$

$$\sum_{n_i = n - j_{sa}^{ik} - j_{ik} - \mathbb{k}_1}^n \sum_{n_{is} = n + \mathbb{k}_2 - j_{ik} + 1}^{()} \sum_{n_{ik} = n + \mathbb{k}_3 - j_{ik} + 1}^{()} \sum_{(n_{sa} = n - j_{sa}^{ik} - j_{ik} - \mathbb{k}_3)}^{()} \sum_{n_s = n - j_i + 1}^{()}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDÜNYA

$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik} \binom{()}{j_{sa}^{sa}=j_{sa}}} \sum_{j_i=1}^{l_i - l + 1}$$

$$\sum_{n_i=n+l_k}^n \binom{n_i - j_{ik} - l_{k_1} + 1}{n_{ik} = n + l_{k_2} + \dots - j_{ik} + 1} \binom{n_{ik} + j_{ik} - j_{sa} - l_{k_2}}{n_{sa} = n + l_{k_3} - j_{sa}} \binom{j_{sa} - l_{k_3}}{n_s = n - j_i + 1}$$

$$\frac{(n_{ik} - 1)!}{(j_{ik} - 1)! \cdot (n_i - j_{ik} + 1)!} \cdot \frac{(n_{ik} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{sa} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - l_{k_3} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_i + j_{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

GÜLDÜZYAN

$$\begin{aligned}
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \\
 & \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} \\
 & \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \\
 & \sum_{=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} \\
 & \sum_{sa=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}^{()} \\
 & \frac{(l + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_i \leq D + 1 - n \wedge$

$1 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - 1 \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$j_{sa}^{ik} - 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik+1})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik+1}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik})}^{(i_s-j_{ik}-\mathbb{k}_1)}$$

$$\frac{(n_{sa}=n+\mathbb{k}_2-j_{sa}^{sa+1}) \cdot (n_s+j_i+1)}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-\mathbb{k}_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})} \sum_{j_i=s}^{l_i - i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik})}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \sum_{(n_s=j_{i+1})}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - j_{sa} - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(n_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{j_s - k}{k}$$

$$\sum_{j_{ik}=j_{sa}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{k=1}^{n} \binom{n - k}{k} \binom{j_{ik} - k_1 + 1}{k_1}$$

$$\sum_{n_{sa}=n_{ik}+j_{sa}-k_2}^{j_{sa}-k_2} \sum_{n_{sa}+j_{sa}-j_i-k_3}^{j_{sa}-j_i-k_3}$$

$$\frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge s = k > \wedge$$

$$j_s - j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{(j_s)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_s+j_{sa}^{lk}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-lk_3-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i-lk_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})!(j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}^{l_i-l+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2+lk_3-j_{ik}+1)}^{(n_i-j_{ik}-lk_1+1)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - n_{is} - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(l_s - j_{sa} - l_s + j_i - s)! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜZÜMÜYA

$$\sum_{k=1}^{l_i} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-l_{k_1}+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - l_{k_2} \wedge j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_2}: l_{k_2} \geq 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{D}{l}} \sum_{j_s=1}^{\binom{D}{j_s}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{\substack{\binom{D}{j^{sa}} \\ (j^{sa}=j_{sa})}} \sum_{j_i=s}^{\binom{D}{l_i-i}+1} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_{ik}-k_1+1) \\ (n_{ik}=n+k_2+k_3-j_{ik}+1)}} \\
 & \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-k_2 \\ n_{sa}=n+k_3-j^{sa}+1}} \sum_{\substack{(n_{sa}+j^{sa}-j_i-k_3) \\ (n_s=n-j_i+1)}}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_s - l_{sa} - 1)!}{(l_i + j_s - j_i - l_{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{i=1}^n \sum_{(j_s=2)}^{j_{sa}+2} \sum_{(k=j_s+j_{sa})}^{(n)} \sum_{(j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n)} \\
 & \sum_{k=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{(n)} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^n \sum_{(j_s=1)}^{(n)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})} \frac{(n_i+j_s-s-l_{k_1}-l_{k_2}-j_{sa})!}{(n_i+j_s-n-l_{k_1}-l_{k_2}-l_{k_3}-j_{sa})! \cdot (n-s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} = l_i + j_{sa} - s > j_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^{ik}-1, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}-1, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s_1 + s_2 \wedge$$

$$l_{k_2}: 2 \leq l_{k_2} \leq 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3}$$

$$f^Z_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{l(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=s}^{l_i - l + 1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \\
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=0}^{l_i - k - j_{sa}^{ik} + 1} \sum_{s=2}^{j_i - k - j_{sa}^{ik} + 1}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{j_i - k - j_{sa}^{ik} + 1} \sum_{j_{ik} + j_{sa} - j_{sa}^{ik}}^{j_i - k - j_{sa}^{ik} + 1} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_{ik} = n_s + \mathbb{k}_3 - j_s + 1}^{n_{ik} = n_s + \mathbb{k}_3 - j_s + 1} \sum_{n_{ik} = n_s + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{sa})! \cdot (n + j_{sa}^s - j_s - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=i}^{(n)} \sum_{l(j_s=1)}$$

$$\sum_{j_{ik} = j_{sa}^{ik}} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = s}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{()} \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{sa})!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{sa})! \cdot (n - s)!} \cdot \frac{(D - l_i)}{(D + s - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_i - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 < j_{sa} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, l_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z \in \{1, 2, 3\} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s + n - n - 1)!}{(n_s + n - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + n - l_{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=i}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}^{l_i - i + 1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_i-1} \sum_{j_s=2}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_s)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{ik}=n_{ik}+j_{ik}-l_{k2})} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_{is} - j_s - n - l_{k1} - l_{k2} - l_{k3} - j_{sa})! \cdot (n + j_{sa} - j_s - s)!}{(n_{is} - j_s - n - l_{k1} - l_{k2} - l_{k3} - j_{sa})! \cdot (n + j_{sa} - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k1}+1)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{(\)}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa} \geq l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{i-1} \sum_{\binom{(\)}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{(j_i+j_{sa}-s)}{j^{sa}=j_{sa}+1}} \sum_{\binom{l_{sa}+s-k-j_{sa}+1}{j_i=l_i+n-D}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1}} \sum_{\binom{n_{is}+j_s-j_{ik}-\mathbb{k}_1}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}$$

$$\sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}} \sum_{\binom{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_s - j^{sa} - s)!} \cdot \\
 & \frac{(D - j_i - n + l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^l \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
 & \sum_{j_{ik} = n + j_{sa}^{ik} - j_{sa}}^{(l_{sa} - k + 1)} \sum_{(j^{sa} = j_{sa} + 1)}^{l_s - k + 1} \sum_{j_i = l_{sa} + s - k - j_{sa} + 2}^{l_i - k + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=i}^{()} l_i^{()} \cdot \\
 & \sum_{j_{ik}=0}^{()} j_{ik}^{()} \cdot \sum_{j_{sa}=0}^{l_i - i^{l+1}} (j^{sa} = j_{sa}) \cdot j_i^{i+n-D} \\
 & \sum_{n_i=0}^n \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_i - j_{ik} - k_1 + 1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{j^{sa} - k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j_{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_{sa}+s-k-j_{sa}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{()}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_3)}^{()} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{()}$$

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3)! \cdot (j_{sa}^s)! \cdot (j_s-s)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D) \cdot (j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{sa} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$
 $l_{sa} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$
 $D - n < l_i \leq D - l_s + s - 1 \wedge$
 $D \geq n < n \wedge I = k > 0 \wedge$
 $j_{sa} < j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$
 $s \geq 5 \wedge s = s + k \wedge$
 $k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} l_{ik+s-k-j_{sa}^{ik}+1} \sum_{j_i=l_i+n-D}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{j_i=l_{ik}+s-k-j_{sa}^{ik}+2}^{l_i-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{is}-j^{sa})!} \cdot \frac{(n_{sa}-n_{is}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_{sa}-s)! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{l=(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{j_s=1}^{D+l_s+s-l_i} \sum_{j_{ik}=j_s}^{l_i} \sum_{j_{sa}=j_{ik}+1}^{l_i} \sum_{j_i=l_i+n-D}^{l_{ik}+s-k-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}^{ik}-j_{sa}}^{j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}} \sum_{j_i=l_i+n-D}^{j_i+l_{sa}-s}$$

$$\sum_{n+l_k}^{(n_{is}-1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_{is}-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{i=1}^{i^{l-1}} \sum_{(j_s=j_{ik}, j_{sa}^{ik}+1)} \sum_{(j_i+j_{sa}-s)} \sum_{(j_{sa}=j_s-1)} \sum_{j_i=l_i+n-D} \sum_{(n_i=n+\mathbb{k})} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{ik}+j_{sa}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{(n_s=n-j_i+1)} \sum_{(n_s=n-\mathbb{k}_3-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=l_s+s-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j)}^{(n_{sa}=n+k_3-j)} \sum_{n_s=n-j_i+1}^{(n_{sa}=n+k_3-j)} \\
 & \frac{(n_{is}-j_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \cdot \frac{(n_{is}-j_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}) \cdot (n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - j_i - 1)!}{(n_s - j_i - n - j_i - 1)!} \\
 & \frac{(l_i + j^{sa} - l_{sa} - s)!}{(l_i + j^{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \frac{(D - l_i)!}{(D + l_s + s - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \sum_{j_s=1}^{i^{l-1}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{()} \sum_{j_{sa}^{ik}=j_{sa}+1}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{j_s=i}^{()}$$

$$\sum_{j_{ik}=i}^{()} \sum_{j_{sa}=i}^{()} \sum_{j_i=i}^{()} \sum_{j_s=i}^{()}$$

$$\sum_{n_{sa}=i}^{n} \sum_{n_{ik}=i}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{s_3}=i}^{(n_{s_3} - j_{ik} + 1)} \sum_{n_{s_2}=i}^{(n_{s_2} - j_i - k_2)} \sum_{n_{s_1}=i}^{(n_{s_1} - j_i - k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \frac{(n_{is}-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3)!}{(n_{is}+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)! \cdot (n+j_s^s-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-1)! \cdot (s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$

$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^i, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1$

$\mathbb{k}_z: z = 1, 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{is} - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
& \frac{(D + j_i - n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=i}^{\binom{D}{i}} \sum_{l=j_s=1}^{\binom{D}{i}} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{\binom{D}{i}} \sum_{j_i=l_i+n-D}^{l_i-i+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{(\quad)}{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \binom{(\quad)}{(j_{sa}=l_i+n+j_{sa}-D-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_i+n-k-j_s+1)} \sum_{n_{ik}=j_s-j_{ik}-k_1}^{(\quad)}$$

$$\binom{(\quad)}{(n_{sa}=n_{ik}+j_{sa}-k_2)} \sum_{n_{sa}+j_{sa}-j_i-k_3}^{(\quad)}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_i - j_s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n - l_i \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j^{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j^{sa}-j_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=l_i+n-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-\mathbb{k}-\mathbb{k}_1}^{n_{is}+j_s-\mathbb{k}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\sum_{(n_{sa}+j^{sa}-j_{sa})}^{(n_{sa}+j^{sa}-j_{sa})}$$

$$\sum_{(n_{sa}-n_s-1)}^{(n_{sa}-n_s-1)}$$

$$\sum_{(n_{sa}+j^{sa}-n_s-j_i-\mathbb{k}_3)}^{(n_{sa}+j^{sa}-n_s-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})}{(n_{is} - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j^{sa}+1)}^{()}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(l_s+j_{sa}-k)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_s+j_{ik}-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=i}^{\binom{)}{}} \sum_{l \binom{)}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})}^{\binom{)}{}} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

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$$\begin{aligned}
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j^{sa} - k_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(l_s - j_{sa} - l_s - s)! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}-k-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_i, j_{sa}^{ik}+1)}^{(j_s=j_i, j_{sa}^{ik}+1)} \cdot \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \cdot \sum_{j_{ik}=j_i+j_{sa}-j_s}^{(j_{ik}=j_i+j_{sa}-j_s)} \cdot \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_i=j^{sa}+s-j_{sa})} \cdot \\
 & \sum_{n_i=n+k}^{(n_i=n+k)} \cdot \sum_{(n_{is}=n+k-j_s+1)}^{(n_{is}=n+k-j_s+1)} \cdot \sum_{n=n+k_2+k_3-j_{ik}+1}^{(n=n+k_2+k_3-j_{ik}+1)} \cdot \\
 & \sum_{(n_{ik}=n-j_{sa}-k_2)}^{(n_{ik}=n-j_{sa}-k_2)} \cdot \sum_{(n_{sa}=n-k_3-j^{sa}+1)}^{(n_{sa}=n-k_3-j^{sa}+1)} \cdot \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\sum_{k=1}^{()} \sum_{i=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=l_i+n}^{l_i-i+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(j^{sa}-k_3)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(l_i+j_{sa}-j_i-l_{sa})! \cdot (j_i-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_s + s - n - 1$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k_z: z = 3 \wedge k_z = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (j_i - \dots)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + \dots - l_{sa})!}{(j^{sa} + l_i + \dots - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D + \dots - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik+1})}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_i+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_{sa}=j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{(l_i - i^{l+1})} \sum_{n_i=n+\mathbb{k}}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa}=n+\mathbb{k}_3 - j^{sa} + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \sum_{n_{ik}=n+\mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}^{ik}}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} n_{ik}=n_{is}-j_{ik}-k_1$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{()}$$

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n_{is}-j_s-k_1-k_2-k_3)! \cdot (j_s-s)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k_1-k_2-k_3+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i < j_i + j_{sa} - s \wedge n_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D - n - 1 < l_i \leq D - l_s + s - 1 \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, k_2, k_3, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

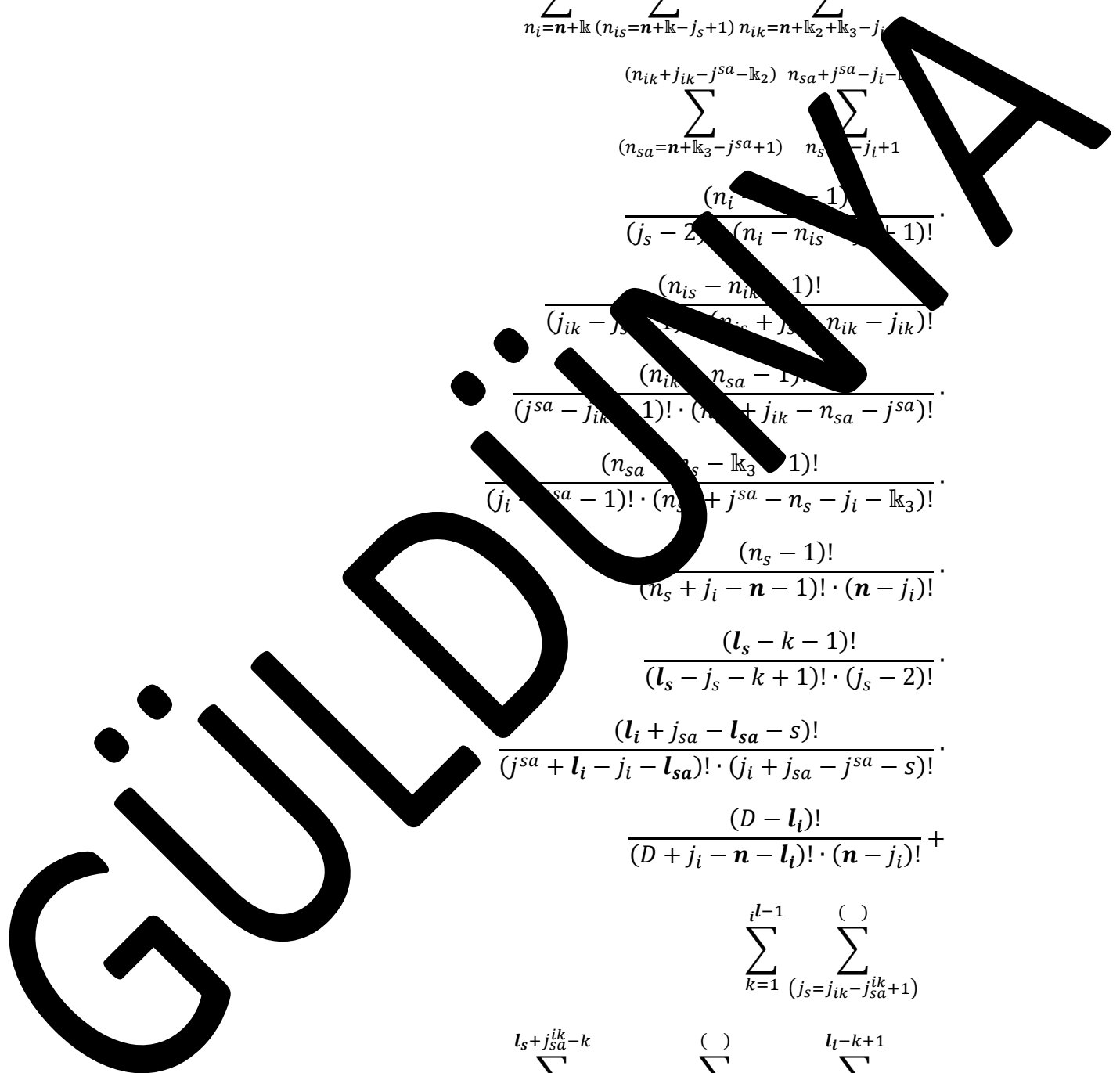
$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{sa}-1)! \cdot (n_{is}+j_{sa}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \binom{(\quad)}{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$



$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{ik}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_s-1)! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{l(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_i + j_{sa} - l_s - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} \cdot \sum_{j_s=1}^{D+l_s+s-l_i} \sum_{j_{ik}=j_s}^{l_i} \sum_{j_{sa}=j_s}^{(j_s - j_{sa} + 1)} \sum_{j_{ik}=n+j_{sa}^{ik}-k}^{n+j_{sa}^{ik}-D-s} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^{j_i} \sum_{n+k}^{(n_i-1)} \sum_{n_{is}=n+k-j_s+1}^{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(j_s)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(j_s)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{zS} j_s \cdot j_{ik} j_{sa} \cdot j_i = \sum_{k=1}^{i-l} \sum_{s=2}^{n-D-s} \sum_{j_{ik}=j_s+1}^{(n_i-1)} \sum_{j_{sa}=j_{ik}+j_{sa}^{(k)}}^{(n_{sa}-1)} \sum_{j_i=l_i+n-D}^{(n_i-1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}-1)} \sum_{n_s=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{sa}-1)} \sum_{n_s=n-j_i+1}^{(n_{sa}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j^{sa}+s-1}^{(l_i-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j_{ik}+j_{sa}-j_{sa}^{lk}-j_{ik}+1)} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}^{lk}-1)}^{(n_{ik}+j_{ik}-j_{sa}^{lk}-j_{ik}+1)} \sum_{(n_s=n-j_i+k_3)}^{(n_{ik}+j_{ik}-j_{sa}^{lk}-j_{ik}+1)} \\
 & \frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(i)} \sum_{(j_s=1)}^{(i)} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - j_i - n - \mathbb{k}_3 - 1)!}{(n_s - j_i - n - \mathbb{k}_3 - 1)!} \cdot \\
 & \frac{(l_i + \mathbb{k}_3 - l_{sa} - s)!}{(l_i - j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{()} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{()} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_i}^{a, j_i} &= \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\ &\sum_{k=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \end{aligned}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} +$$

$$\sum_{k=0}^{i-1} \sum_{l=0}^{D-s+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \frac{(l_{ik}-k-j_{sa}^{ik}+2)!}{(j_i-j_s-j_{sa}^{ik}-1)! \cdot (j_i-j_s-j_{sa}^{ik})! \cdot (j_i+j_{sa}-j_{sa}^{ik})!}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=l_i}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=l_i+1}^{()} \sum_{j_i=n-D}^{()}$$

$$\sum_{j_i=n+1}^n \sum_{j_i=n+1}^{(n_i-j_{ik}-k_1+1)} \sum_{j_i=n+1}^{(k_3-j_{ik}+1)} \sum_{j_i=n+1}^{(n_{sa}+j_{ik}-k_2)} \sum_{j_i=n+1}^{(n_{sa}-j_i-k_3)} \sum_{j_i=n+1}^{(n_{sa}+k_3-j^{sa})} \sum_{j_i=n+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s - \mathbb{k}_2, j_{sa}^s - \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + 1$$

$$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{is} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_{is} - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_s - j^{sa} - s)!} \cdot \\
& \frac{(D + j_i - n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=i}^{\binom{D}{l}} \sum_{l \binom{D}{j_s=1}} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{\binom{D}{j^{sa}=j_{sa}}} \sum_{j_i=l_i+n-D}^{l_i-l+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{D}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{D}{n_s=n-j_i+1}}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - j_i - l_{sa})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_s)}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}-j_{sa}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_{is}+n_{ik}-k_1-k_2-k_3)!}{(n_{is}+n_{ik}-k_1-k_2-k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s < n \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{zS} \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_{ik}+j_{sa}^{ik}-k-s+1} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa}-l_{k2})! \cdot (n_{is}+j_s-j_{ik}-l_{k3})!}{(n_{sa}=n+l_k-j_s+1)! \cdot (n_s=n-j_i+1)!} \cdot \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \\
 &\frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 &\frac{(n_{sa}-n_s-l_{k3}-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{ik}+j_{sa}^{ik}-k-s+2}^{l_i-k+1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}}^{()} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{()} \sum_{j_i=s}^{l_i-i+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

$$\sum_{n_{s_a}=n+l_{k_3}-j^{s_a}+1}^{n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{s_a}+j^{s_a}-j_i-l_{k_3})}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+1-j_i-\mathbb{k}_3)} \frac{(n_i+j_s-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_s)!}{(n_i+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa})! \cdot (n-s)!} \cdot (n-l_i)!$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_i + s = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$

$s: \{j_{sa}^{ik}-1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i-1, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$\mathbb{k}_2: 2 \leq \mathbb{k}_2 \leq 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_s)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-l_{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - k - 1)!}{(l_s - \dots - k + 1)! \cdot (\dots - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - \dots)!}{(j_{ik} + l_{sa} - j^{sa} - \dots) \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - \dots)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(\dots)} \sum_{l=1}^{(\dots)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\dots)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\dots)} \sum_{j_i=s}^{l_i - i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
& \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_i}^{()} \sum_{(j_{sa} = j_i + j_s)}^{()} \sum_{s+1}^{l_s + s - k}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_i - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2)}^{()} \sum_{(n_s = n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} - j_s - n_{ik} - k_1 - k_2 - k_3 - a)! \cdot (n + j_{sa} - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{()} \sum_{(j_{sa} = j_{sa})}^{()} \sum_{j_i = s}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{ik} = n_i - j_{ik} - k_1 + 1)}^{()}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2}^{()} \sum_{(n_s = n_{sa} + j_{sa} - j_i - k_3)}^{()}$$

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$$\frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$j_{ik} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}^{ik}-k-s+1)}$$

$$\sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(n_i - n_{is} - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{j_s} \sum_{j_{sa}^{ik}=k}^{(j_s - k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_{sa}-n_{is})}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}-j_s} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa} - i^{l+1})} \sum_{(j_{sa}=j_{sa})}^{()} \sum_{(j_{sa})}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-l_{k_2}-j_{sa}+1}^n \sum_{(n_s=n-j_i+1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{(n_s=n-j_i+1)}^{(n_s + l_{k_2} - j_{ik} + 1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(n_i - j_{ik} - l_{k_1} + 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(n_s - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

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$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}^{ik}-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})} \\
& \frac{(n_{is}-s-l_{k_1}-l_{k_2}-l_{k_3})!}{(n_{is}+j_s-n-l_{k_1}-l_{k_2}-l_{k_3}-j_{sa}^{ik})! \cdot (n+j_{sa}^{ik}-s)!} \cdot \\
& \frac{(l_s-l_k-1)!}{(l_s-l_k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
& \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i=s} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})}^{()} \\
& \frac{(n_i+j_s-s-l_{k_1}-l_{k_2}-l_{k_3}-j_{sa}^s)!}{(n_i+j_s-n-l_{k_1}-l_{k_2}-l_{k_3}-j_{sa}^s)! \cdot (n-s)!} \\
& \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{l-1} \frac{(l-1)!}{(j_s - j_{ik} - j_{sa} - 1)!} \cdot \frac{j_{sa}^{sa} + j_{sa}^{ik} + j_{sa}^{sa} (l_s + j_{sa})}{(j_{ik} = j_{sa}^{ik} + j_{sa}^{sa}, j_{sa} = j_{sa}^{sa} + j_{sa}^{ik}, j_s - j_{sa})} \cdot \sum_{n+k}^n \frac{(n - j_s + 1)!}{(n_{is} = n + k_1 + 1) (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)} \cdot \sum_{n_{is} + j_s - j_{ik} - k_1}^{n_{is} + j_s - j_{ik} - k_1} \frac{(n_{ik} + j_{sa} - j_{sa} - k_2)!}{(n_{sa} = n + k_3 - j_{sa} + 1)} \cdot \sum_{n_{sa} + j_{sa} - j_i - k_3}^{n_{sa} + j_{sa} - j_i - k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^{(n_{sa}+s-j_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k+l_{k_3}-j_{sa}^{ik}+1)}^{(n_{is}+j_s-j_{sa}-l_{k_1})} \\
 & \sum_{(n_{sa}=n+l_k+l_{k_3}-j_{sa}^{ik}+1)}^{(n_{sa}+j_{sa}-j_i-l_{k_3})} \sum_{j_{i+1}}^{(n_{sa}+j_{sa}-j_i-l_{k_3})} \\
 & \frac{(n - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n - n_{ik} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_{k_3}-j_{ik})}^{(n_i-j_{ik}-l_{k_1}+1)}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_{ik} - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(1 + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

$$\sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

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$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - \dots)}$$

$$\sum_{k=0}^{(\dots)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=\dots} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=\dots} \sum_{(n_{ik}=n_i - j_{ik} - k_1 + 1)}$$

$$\sum_{n_{ik}+j_{ik}=\dots - k_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + j_s \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - k_1 + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s < j_s \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j_{sa}^{ik})}^{(n_{sa}=n+k_3-j_{sa}^{ik})} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \\
 &\frac{(n_{is}-j_s-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \\
 &\frac{(n_{is}-j_s-k-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \cdot \\
 &\frac{(n_{ik})! (n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 &\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_s-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 &\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}
 \end{aligned}$$

GÜLDENWA

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - l_i - 1)!}{(n_s - j_i - n - l_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZYAN

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})}^{(\cdot)} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\sum_{n_{ik}+j_{ik}+j_{sa}-\mathbb{k}_2}^{(\cdot)} \sum_{(j_i-\mathbb{k}_3)}^{(\cdot)}$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{()}{i}} \sum_{(j_s=1)}^{\binom{()}{j_s}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - \mathbb{k}_3 - 1)! \cdot (j^{sa} - j_{sa})!}{(l_s + j_{sa} - j^{sa} - \mathbb{k}_3 - 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{+j_{sa}^{ik} - k} \sum_{(j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜNKYA

$$\sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-l-k_1+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_i + j_s - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - k_1 - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k_1 + k_2 + k_3 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - j_{sa}^s \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = k_1 + k_2 + k_3 \wedge$$

$$k_2: k_2 \geq 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=1}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik} = j_{sa}^{ik}}^{(l_{sa} - i + 1)} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}} \\
 & \sum_{\substack{n_{ik} + j_{ik} - j^{sa} - k_2 \\ n_{sa} = n + k_3 - j^{sa} + 1}} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}
 \end{aligned}$$

GÜLDENSA

$$\begin{aligned}
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i - (n - j_i))!} \cdot \\
 & \sum_{i=1}^{i=l-1} \sum_{j_s=2}^{j_s^{ik+2}} \\
 & \sum_{j_s=j_s+j_{sa}}^{n} \sum_{j_{ik}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^{n} \\
 & \sum_{i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{()} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{()} \sum_{i=l}^{()} (j_s=1)
 \end{aligned}$$

GÜLDÜMNA

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j_i-j-k_3)}$$

$$\frac{(n_i + j_s - s - k_1 - k_2 - j_s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_i + s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$

$s: \{j_{sa}^{ik}-1, j_{sa}^{ik}, k_2, j_{sa}^i-1, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k_z: 2 \leq k_2 \leq 3 \wedge k = k_1 + k_2 + k_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_s)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{sa}+l_{sa}-j_{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-l+1)} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}$$

GÜLDÜZMAYA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (l_{sa} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=2}^{i^{l-1} (l_s - k + 1)}$$

$$\sum_{j_s + j_{sa}^{lk} - 1} \sum_{(j^{sa} - k + j_{sa} - j_{sa}^{lk})} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n + \mathbb{k}}^{(n_i - 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=1}^{()} \sum_{l (j_s=1)}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{()} \sum_{(j^{sa} = j_{sa})} \sum_{j_i = s}$$

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$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\cdot)} \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)}{(D + s - l_i)! \cdot (n - s)!}}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\}$$

$$s \geq 5 \wedge s = s + \mathbb{k}$$

$$\mathbb{k} = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^s, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{sa} + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - j_{ik})! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{i-k+1} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{ik}+s-k-j_{sa}^{ik}+2}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_{ik}=j_s}^{(l_i)} \sum_{j_{sa}=j_i+j_{sa}-s}^{(l_i)} \sum_{j_i=l_i+n-D}^{(l_i)} \sum_{j_s=1}^{(l_i)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{(j_{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_{ik}+n-D}^{l_{ik}+s-k-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-\mathbb{k}_1} \sum_{(n_{is}+j_{sa}^{ik}-\mathbb{k}_2-\mathbb{k}_3)}^{(\cdot)} \sum_{(n_{is}-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3)}^{(\cdot)} \frac{(n_{is}-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3)!}{(n_{is}+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)! \cdot (n_{is}+j_{sa}-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \geq D - n + 1 \wedge$

$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n < \dots \leq D + \dots + s - n - 1 \wedge$

$D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n}^{l_s+s-k} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 &\sum_{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}=n+l_k-j^{sa})}^{(n_{sa}=n+l_k-j^{sa})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}^{ik}-j_{sa})} \\
 &\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik}) \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-l_{k_3}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{\substack{() \\ (j^{sa}=j_i+j_{sa}-s)}} \sum_{\substack{l_i-i+1 \\ j_i=l_i+n-D}}$$

$$\sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_{ik}-l_{k_1}+1) \\ (n_{ik}=n+k_2+k_3-j_{ik}+1)}}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1} \sum_{\substack{(n_{sa}+j^{sa}-j_i-l_{k_3}) \\ (n_s=n-j_i+1)}}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_{ik}=j_{sa} - j_{sa} + k}^{j_{sa} + j_{sa}^{ik} + 1} (j_s = j_{ik} - j_{sa}^{ik} + 1) \\
& \sum_{j_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(j^{sa}=j_i+j_{sa}-s)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa} j_i = \sum_{k=0}^{i^{l-1}} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{n+j_{ik}-j_{sa}^{ik}} (l_{ik}-j_{sa}^{ik}-k-j_{sa}^{ik}) \sum_{j_i=j_{sa}^{ik}+s-j_{sa}^{ik}}^{n+j_{ik}-j_{sa}^{ik}} (n_i-j_{sa}^{ik}-1) \sum_{n_i=n+1}^{n} (n_i-j_{sa}^{ik}-1) \sum_{n_{is}=n+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} (n_{is}-n_{ik}-1) \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}^{ik}+1}^{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} (n_{sa}+j_{sa}^{ik}-j_i-\mathbb{k}_3) \sum_{n_s=n-j_i+1}^{n_{sa}=n+\mathbb{k}_3-j_{sa}^{ik}+1} (n_i-n_{is}-1)! \cdot (j_s-2)! \cdot (n_i-n_{is}-j_s+1)! \cdot (n_{is}-n_{ik}-1)! \cdot (j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})! \cdot (n_{ik}-n_{sa}-1)! \cdot (j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})! \cdot (n_{sa}-n_s-\mathbb{k}_3-1)! \cdot (j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}^{ik}-n_s-j_i-\mathbb{k}_3)! \cdot (n_s-1)! \cdot (n_s+j_i-n-1)! \cdot (n-j_i)! \cdot (l_s-k-1)! \cdot (l_s-j_s-k+1)! \cdot (j_s-2)!$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j_{sa} = l_{ik} + j_{sa}^{ik} - j_{sa}^{ik} + 2)}^{(l_i + j_{sa} - k - s + 1)} \dots - j_{sa}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n - k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_s - j_{ik} - k_1)}^{(n_{is} + j_s - j_{ik} - k_1)} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDÜZÜMÜ

$$\begin{aligned}
 & \sum_{k=1}^{\binom{D-l_i}{j_s=1}} \sum_{j_s=1}^{\binom{D-l_i}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{l_i+j_{sa}-i-l-s+1}{j_{sa}=l_i+n+j_{sa}-D-s}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{l_i+j_{sa}-i-l-s+1}{j_{sa}=l_i+n+j_{sa}-D-s}} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_k+j_{sa}-j_{ik}+1}^{\binom{n_i-j_{ik}-l_{k_1}+1}{n_i=n+l_k+j_{sa}-j_{ik}+1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j_{sa}}^{\binom{n_{ik}+j_{ik}-j_{sa}-l_{k_2}}{n_{sa}=n+l_{k_3}-j_{sa}}} \sum_{n_s=n-j_i+1}^{\binom{n_{sa}+j_{sa}-n_{ik}-l_{k_3}}{n_s=n-j_i+1}} \\
 & \frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!} \cdot \frac{(n_{ik}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+l_{k_2}-n_{sa}-j_{sa})!} \\
 & \frac{(n_{sa}-l_{k_3}-1)!}{(n_i-j_{sa}-1)! \cdot (n_i+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{\binom{D+l_s+s-n-l_i}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{lk}-j_{sa}}^{\binom{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}{j_{sa}^{lk}=l_i+n+j_{sa}-D-s}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}{j_{sa}^{lk}=l_i+n+j_{sa}-D-s}} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{\binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{\binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_{is} - s - k_1 - k_2 - k_3)! \cdot \frac{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa} \leq j_i + s - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(n_s - k - 1)!}{(n_s - k - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

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$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=l_i^{sa}+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{l_i+j_{sa}-j_i-s+1}{j_i} \binom{l_i-1}{j_i-1} + \sum_{j_i=j^{sa}+s-j_{sa}} \binom{l_i-1}{j_i-1}$$

$$\sum_{n_i=n+\mathbb{k}_1} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \binom{n_i-j_{ik}-\mathbb{k}_1+1}{n_i-j_{ik}-\mathbb{k}_1+1}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1} \sum_{(n_s=n-j_i+1)} \binom{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(n_i-j_s+1)} \sum_{j_{ik}=n_i+n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n_i+k)}^{(n_i-j_s+1)} \sum_{(j_{sa}=n_{ik}+j_{sa}-k_2)}^{(n_i-j_s+1)} \sum_{(j_{sa}=j_i-k_3)}^{(n_i-j_s+1)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n - l_s \leq D + l_i + s - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - 1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j^{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+1}^{l_i+n+j^{sa}-D-s-1} \sum_{(j^{sa}=l_i+n+j^{sa}-D-s)}^{(l_i+j^{sa}-k-s+1)} \sum_{j_i=j^{sa}+s}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-k_2) \dots (n_{ik}+j_{ik}-j^{sa}-k_3)}{(n_{sa}=n+k_3-j^{sa}) \dots (n_s=n-j_i+1)}$$

$$\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}) \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j^{sa}-l_{ik}-j^{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j^{sa}-j_{ik}-j^{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j^{sa}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j^{sa}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j^{sa}-j^{sa})}^{(l_i+j^{sa}-k-s+1)} \sum_{j_i=j^{sa}+s-j^{sa}}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{\substack{(l_i+j_{sa}-i-l-s+1) \\ (j^{sa}=l_i+n+j_{sa}-D-s)}} \sum_{\substack{j_i=j^{sa}+s-j_{sa} \\ (n_i-j_{ik}-k_1+1) \\ (n_{ik}=n+k_2+k_3-j_{ik}+1)}} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-k_2 \\ (n_{sa}+j^{sa}-j_i-k_3) \\ n_{sa}=n+k_3-j^{sa}+1}} \sum_{\substack{(n_s=n-j_i+1)}}
 \end{aligned}$$

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$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})!}{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{j_{ik} - n + j_{sa}^{ik} - 1} \binom{n - j_s}{j_s} \sum_{j_i = j^{sa} + s - j_{sa}}^{n - j_s + 1} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_{is} - n + \mathbb{k} - j_s + 1)} \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2}^{(n_{sa} = n_{is} + j^{sa} - j_i - \mathbb{k}_3)} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa} j_i = \sum_{k=0}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$l_i + n_{sa}^{ik} - D - s - 1 \quad (n_{sa} - k - s)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1} \sum_{j_s=l_i+n_{sa}^{ik}-D-s} \sum_{j_i=j_{sa}^i+s-j_{sa}}$$

$$\sum_{n_i=n_{sa}^{ik}+1}^{n_i} \sum_{n_{is}=n_{sa}^{ik}+1}^{(n_i-j_{sa}^{ik})} \sum_{n_{ik}=n_{sa}^{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}^i-j_i-\mathbb{k}_3)}$$

$$\sum_{(n_{sa}=n_{sa}^{ik}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^i)!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa}^i - 1)! \cdot (n_{sa} + j_{sa}^i - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - k} \sum_{(l_i + j_{sa} - k - s + 1)}^{()} \sum_{(j_{sa} = j_{ik} - j_{sa}^{ik})}^{()} \sum_{(j_{sa})}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k - j_{ik} + 1)}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{(n_{sa} = n - k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j_{sa} - k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i+j_{sa}-i^{l-s+1})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_{ik}-k_1+1)} \sum_{(n_{ik}=n+k_2+j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+k-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1-k_3-1)!}{(j^{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-k}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, l_i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!} +$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i + j_{sa} - n - s + 1)} \sum_{(j^{sa}=l_{ik} + j_{sa} - D - s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_i)} \sum_{j_s=1}^{(j_s)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_{sa}^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{is}=n_{ik}+j_s-k_2)}^{()} \sum_{(n_{is}-s-k_1-k_2-k_3)}^{()} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n_{is}+j_{sa}-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s = D - n + 1 \wedge$

$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n - 1 \leq D + j_s + s - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - k_1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)} \\
 &\sum_{(n_{sa}=n+k_3-j_{sa}-1)}^{(n_{ik}+j_{ik}-j^{sa}-j_{sa})} \sum_{n_s=n-j_i+k_3}^{(n_{sa}+j_{sa}-j_i-k_3)} \\
 &\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \cdot \\
 &\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 &\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 &\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 &\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{l-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i+j_{sa}-k-s+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ (n_s = n - j_i + 1)}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()} \sum_{j_{ik}=j_{sa}^{ik}}$$

$$\sum_{\substack{(l_i + j_{sa} - i - l - s + 1) \\ (j^{sa} = l_i + n + j_{sa} - D - s)}} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}}$$

$$\sum_{\substack{n_{ik} + j_{ik} - j^{sa} - k_2 \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}$$

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$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+s-n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(n)} \sum_{j_{ik}=j_s+j_{sa}-j_{sa}^{ik}}^{(n)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n)} \sum_{i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa} j_i = \sum_{k=0}^{i^{l-1}} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}+1} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=j_i+j_{sa}^{ik}}^{j_i+j_{sa}^{ik}+1} \sum_{j_{is}=n+l_{sa}+n+s-D-j_{sa}}^{n+l_{sa}+n+s-D-j_{sa}} \sum_{n_i=n+l_{sa}+n+s+1}^{n+l_{sa}+n+s+1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n+l_{sa}+n+s+1} \sum_{n_{sa}=n+k_3-j_{sa}^{ik}+1}^{n+l_{sa}+n+s+1} \sum_{n_s=n-j_i+1}^{n+l_{sa}+n+s+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^i)!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa}^i - 1)! \cdot (n_{sa} + j_{sa}^i - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j_{sa} = j_i + l_{sa} - s)}^{()} \sum_{j_i = l_{ik}}^{l_{sa} + s - j_{sa} + 1} \sum_{(j_s = j_{ik} + 2)}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n - k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_s - j_{ik} - k_1)}^{()} \sum_{(n_s = n - k_3 - j_{ik} + 1)}^{()}$$

$$\sum_{(n_{ik} + j_{sa}^{sa} - k_2)}^{()} \sum_{(n_{sa} + j_s - j_i - k_3)}^{()} \sum_{(n_{sa} + k_3 - j_{sa}^{sa})}^{()} \sum_{n_s = n - j_i + 1}^{()}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=1)}^{()} \sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}+1}^{()} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}-1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n+k_3-j_{sa}}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(j^{sa}-k_3)} \frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-k_1+1)!} \cdot \frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-k_2-1)! \cdot (n_{ik}+j_{ik}-j^{sa}-k_2-k_3-1)!} \cdot \frac{(n_{sa}-k_3-1)!}{(n_{sa}-j_{sa}-k_3-1)! \cdot (n_i+j_{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{()} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \binom{(\quad)}{\quad}}{(n_{is} - s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq \dots \leq \dots$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \wedge l_i + j_{sa} - s = \dots \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + \dots \wedge$$

$$k_z: z = 3 \wedge \dots = k_1 + \dots + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \binom{(\quad)}{\quad}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \binom{(\quad)}{\quad} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_s+s-k+1}^{l_{sa}+s-k-j_{sa}+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_{sa} - 1)!}{(D + j_{sa} - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{\substack{j^{sa}=j_{sa}^{ik} \\ j_i=l_{sa}+n+s-D-j_{sa}}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}} \binom{l_{sa}+s-j_i-l_{sa}+1}{j_i} \binom{l_{sa}-1}{j_i} +$$

$$\sum_{n_i=n+\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1} \binom{n_i-j_{ik}-\mathbb{k}_1+1}{j_{ik}} \binom{n_i-j_{ik}-\mathbb{k}_1+1}{j_{ik}}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1} \sum_{n_s=n-j_i+1} \binom{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}{j_{ik}} \binom{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{j_i}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{sa}+j_{sa}-s-D-j_{sa}}^{l_s+s-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{()} \sum_{(n_{ia}=n_{ik}+j_{sa}-k_3)}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n_{is} + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - 1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{(j^{sa}+j_{sa}^{ik}-j_{ik}-l_{k_3})}$$

$$\frac{(n_{is}-j_s+1)!}{(j_s-1)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}) (n_{sa}-1)!}{(j^{sa}-1)! (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(\cdot)} \sum_{i=1}^{(\cdot)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik} = j_{sa}^{ik}} \sum_{\substack{(l_{sa} - i + 1) \\ (j^{sa} = l_{sa} + n - D)}} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}} \\
 & \sum_{\substack{n_{ik} + j_{ik} - j^{sa} - k_2 \\ n_{sa} = n + k_3 - j^{sa} + 1}} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}
 \end{aligned}$$

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$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_s - k - j_{sa}^{ik} + 1} \sum_{j_{ik} = n_{sa} + j_{sa}^{ik} - j_s}^{n_{is} + n - D} \sum_{j_i = j^{sa} + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{is} = n + \mathbb{k}_1}^{(n_{is} = n + \mathbb{k}_1 - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}^{(n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \cdot \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=0}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{j_{sa}+j_{sa}^{ik}-j_{sa}} (l_s+j_{sa}) \sum_{j_{ik}=j_{sa}}^{(j_{sa}=l_s+j_{sa}-D)} j_i=j_{sa}+s-j_{sa} \sum_{n_i=n}^{(n_i-j_{sa}-1)} \sum_{n_{is}=n+k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{n_{sa}+j_{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - k} \sum_{(j_{sa} = l_{sa} - k + 1)}^{(l_{sa} - k + 1)} \sum_{j_{sa}}^{j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_s - j_{ik} - k_1)}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{(n_{ik} + j_{ik} - j_{sa} - k_2)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{(n_{sa} + j_s - j_i - k_3)}^{(n_{sa} + j_s - j_i - k_3)} \\
 & \sum_{(n_{sa} - k_3 - j_{sa} + 1)}^{(n_{sa} - k_3 - j_{sa} + 1)} \sum_{n_s = n - j_i + 1}^{n_s} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDÜZÜMÜ

GÜLDENFELD

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+...-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{n_{ik}!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+k-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1-k_3-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \binom{()}{(n_{is}-s-k_1-k_2-k_3)!} \cdot \frac{(n+j_{sa}^s-j_s-s)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-k+1)!} \cdot \frac{(D-l_s)}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \binom{()}{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()} \\
 & \sum_{j_i=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_{sa} - 1)!}{(D + j_{ik} - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{ik}+j_{sa}^{lk})=l_{sa}+n-D} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{j_s=1}^{(j_s)} \sum_{j_i=1}^{(j_i)}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{ik}+j_{sa}^{lk})=l_{sa}+n-D} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{j_s=1}^{(j_s)} \sum_{j_i=1}^{(j_i)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_{sa}^{ik}=j_{sa}+s-j_{sa}}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-k_1}^{(n_i-j_s+1)} \sum_{(n_{is}=n_{ik}+j_{sa}-k_2)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-k_3}^{(n_i-j_s+1)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n_{is} + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s = D - n + 1 \wedge$

$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^{ik}-1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j^{sa})}^{(n_{sa}=n+k_3-j^{sa})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-n_s-j_i-k_3)}$$

$$\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}) n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=1}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik} = j_{sa}^{ik}} \sum_{\substack{(l_{sa} - i + 1) \\ (j^{sa} = l_{sa} + n - D)}} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}} \\
 & \sum_{\substack{n_{ik} + j_{ik} - j^{sa} - k_2 \\ n_{sa} = n + k_3 - j^{sa} + 1}} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_s + s - n - l_i - k} \sum_{j_{ik} = l_{sa} + j_{sa}^{ik} - D - j_s}^{l_s + s - n - l_i - k} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_{ik} + j_{sa} - j_{sa}^{ik})} \\
& \sum_{i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(j_{ik}+j_{sa}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{(j_i-j_s+1)} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{i^{l-1}(l_{sa} - j_{sa})} \sum_{(j_s=2)}^{(j_s-1)}$$

$$j_{ik} = j_s + \dots - 1 \quad (j_{sa} = \dots - n - D) \quad j_i = j_{sa} + s - j_{sa}$$

$$\sum_{n_i=n}^n \sum_{(n_i=n-1)}^{(n_i-1)} \sum_{(n_{is}=n+k_1-j_{sa}+1)}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(n_{ik}+j_{ik}-j_{sa}-k_2)}^{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_i+j_{sa}-j_{sa}^{sa})}^{(j_{sa}^{sa}-j_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{k_1})}^{(n_{is}+j_s-j_{ik}-l_{k_1})} \\
 & \sum_{(n_{ik}+j_{sa}-l_{k_2})}^{(n_{ik}+j_{sa}-l_{k_2})} \sum_{(n_{sa}-j_i-l_{k_3})}^{(n_{sa}-j_i-l_{k_3})} \\
 & \sum_{(n_{sa}+l_{k_3}-j^{sa})}^{(n_{sa}+l_{k_3}-j^{sa})} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDÜZYA

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{(j_i=j^{sa}+s)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2+j_{ik}+1)} \sum_{(n_i-j_{ik}-lk_1+1)}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa}-lk_2)}$$

$$\sum_{(n_{sa}=n+lk_3-j^{sa})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+lk-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n-lk_3-1)!}{(n_{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-lk_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{lk}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)} \sum_{(l_{ik}-k-j_{sa}^{lk}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{(j_i=j^{sa}+s-j_{sa})}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s-j_{ik}-lk_1)}$$

GÜLDENMAYRA

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{sa} + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + j_{sa} - j^{sa} - j_{ik})! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i l - 1} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)}^{(l_s - k - 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GUIDE

A

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_{sa} - 1)!}{(D + j_{sa} - n - l_i)! \cdot (j_i - l_i)!} +$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_{ik}+j_{sa}^{lk})=l_{sa}+n-D} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{j_s=1}^{(j_s)} \sum_{j_s=1}^{(j_s)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_s-k_2-k_3)}^{()} \sum_{j_i=j_{sa}-k_3}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n_{is} + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} - j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa} - k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s - j_{sa} = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_{ik}+j_{sa}^{ik}-k-s+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-j_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_{ik}+j_{sa}^{ik}-k-s+2}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\cdot)} \sum_{l \binom{(\cdot)}{j_s=1}}$$

$$\sum_{j_{i_k} = j_{s_a}^{i_k}}^{(l_{s_a} - i^{l+1})} \sum_{(j^{s_a} = j_{s_a})} \sum_{j_i = s}^{l_i - i^{l+1}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1)}^{(n_i - j_{i_k} - k_1 + 1)}$$

GÜLDENSA

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3 - 1)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(j_s)} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j_s)} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{(j_s)} \sum_{j_i = s+1}^{l_{ik} + j_{sa}^{ik} - k - s + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{(j_s)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})}^{(\cdot)} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)} (j_i+j_{sa}-s) \sum_{j_i=s+1}^{l_s+s-k} l_s+s-k \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{i}} \sum_{l=1}^{\binom{D}{j_s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}^{(l_{sa}-i^{l+1})} l_{i-1}^{l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3 - 1)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i + j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i + j_{sa} - 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = s+1}^{l_s + s - k} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZMÜKAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})}^{(\cdot)} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}^{ik}-k-s+1) \sum_{(j^{sa}=j_{sa}+1)}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n (n_i-j_s+1) \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_i} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}^{ik}-k-s+2)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_i + j^{s_a} - n_{i_s} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{i}} \sum_{l=1}^{\binom{D}{j_s}}$$

$$\sum_{j_{i_k} = j_{s_a}^{i_k}}^{(l_{s_a} - i_l + 1)} \sum_{(j^{s_a} = j_{s_a})}^{l_i - i_l + 1} \sum_{j_i = j^{s_a} + s - j_{s_a}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1)}^{(n_i - j_{i_k} - k_1 + 1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_{ik} + j_{sa}^{ik} - k - s + 1)} \sum_{(j^{sa} = j_{sa} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})}^{(\cdot)} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-j_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_k} - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{i}} \sum_{l \binom{D}{j_s=1}}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}}^{(l_{s_a} - i_{l+1})} \sum_{(j^{s_a}=j_{s_a})}^{l_i - i_{l+1}} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

GÜLDÜSÜNYA

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - k)} \sum_{(j^{sa} = j_{sa} + 1)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_{sa})}^{(\cdot)} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}+1)! \cdot (n_s+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-lk_3+1)!}{(j_i-j^{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-lk_3)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{l \binom{D}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})}^{l_i-i^{l+1}} \sum_{j_i=j^{sa}+s-j_{sa}}
 \end{aligned}$$

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$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - j_i - 1)!}{(n_s - j_i - n - j_i - 1)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s - l_i)} \binom{j_s - l_i}{k}$$

$$\sum_{j_{ik}=j_{sa}}^{j_{ik}=j_s} \sum_{j_i=s}^{j_i=j_s}$$

$$\sum_{k=1}^{n - j_{ik} - j_{sa} + j_{ik} - k_1 + 1} \binom{n - j_{ik} - j_{sa} + j_{ik} - k_1 + 1}{k}$$

$$\sum_{n_{sa}=n_{ik} + j_{sa} - j_{sa} - k_2}^{n_{sa}=n_{ik} + j_{sa} - j_{sa} - k_2} \sum_{n_{sa}=n_{ik} + j_{sa} - j_{sa} - k_3}^{n_{sa}=n_{ik} + j_{sa} - j_{sa} - k_3}$$

$$\frac{(n + j_s - s - k_1 - k_2 - k_3 - j_{sa})!}{(n + j_s - s - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge s = k > 0 \wedge$$

$$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{(j_s=j_{ik}-j_{sa}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)!(n_{is}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=i}^{()} \sum_{l \binom{()}{j_s=1}}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa})}^{l_i-i^{l+1}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\frac{\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - \mathbf{n} - 1)!}{(n_s - j_i - \mathbf{n} - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=\mathbf{n}_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=\mathbf{n}_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_i} \sum_{j_s=1}^{l_i} \sum_{j_{ik}=j_{sa}}^{l_i} \sum_{j_i=s}^{l_i} \sum_{\mathbb{k}_1=1}^{n_{ik}-j_{ik}-\mathbb{k}_1+1} \sum_{\mathbb{k}_2=1}^{n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2} \sum_{\mathbb{k}_3=1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \frac{(D + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa})!}{(D + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge \mathbb{k} > 0 \wedge$

$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}_1, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 1 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k+l_3-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}+1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=i}^{\binom{D}{i}} \sum_{(j_s=1)}^{\binom{D}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-i^{l+1}}
 \end{aligned}$$

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$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - \mathbb{k}_3 - 1)!}{(n_s - j_i - n - \mathbb{k}_3 - j_i)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_{sa} + l_i - j^{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_s} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}} \sum_{j_i=j_s} \sum_{j_i=s}$$

$$\sum_{k=1}^n \sum_{j_i=j_s} \sum_{j_i=s} (n_{ik} - j_{ik} - k_1 + 1)$$

$$\sum_{n_{sa}=n_{ik}+j_{sa}-k_2} \sum_{j_{sa}=j_{ik}-k_2} \sum_{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)!}{(D + j_s - s - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j_i + j_{sa} - j_{sa}^{ik} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = k > 1 \wedge$$

$$j_s = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} - 1 = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{i=l}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-i^{l+1}}
 \end{aligned}$$

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$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - j_i - n - l_{k_3} - 1)!}{(n_s - j_i - n - l_{k_3})!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_{sa} + l_{ik} - j_i - j_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\begin{aligned}
 f_{zS} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-}^{l_{ik}+s-k-j_{sa}^{ik}+1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_s)}^{n_{ik}+j_s-j_{ik}-k_3} \sum_{n_s=n-j_i+1}^{n_{ik}+j_s-j_{ik}-k_3} \\
 &\frac{(n_{is}-n_{ik}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{is}-j_s-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik})! \cdot n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_s)! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_{ik}+s-k-j_{sa}^{ik}+2}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{i-1}}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{is}-n_{is}+j_{ik}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{j_i=l_i+n-D}^{l_i-l+1}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - j_i - n - \mathbb{k}_3 - 1)!}{(n_s - j_i - n - \mathbb{k}_3 - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(l_{sa} + l_i - j_i - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_{ik}+s-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}
 \end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_{sa} + n - D)}^{(j_i + j_{sa} - s)} \sum_{j_i = l_i + n - D}^{l_s + s - k}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - j^{sa} - 1)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i_k} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{lk}-k} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_s=1}^{(n_s - j_{ik} - l_{sa} - 1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_i=l_i+n-D}^{(n_i - l_{sa} - l_{sa} - 1)}$$

$$\sum_{n_i=n+l_k}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3} - j_{ik} + 1)}$$

$$\sum_{n_{sa}=n+l_{k_3} - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \sum_{(n_s=n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{k} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s+s-k} \binom{j_s+s-k}{j_s}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{j_{sa}}{j_{sa}} \sum_{j_i=n-D}^{j_i=n-D} \binom{j_i}{j_i}$$

$$\sum_{n_i=n+k}^n \binom{n}{n_i} \sum_{n_{ik}=n_i-j_s-j_{ik}-k_1}^{(n_i-j_s+1)} \binom{n_i-j_s+1}{n_{ik}}$$

$$\sum_{n_{sa}=n_{ik}-j^{sa}-k_2}^{(n_{sa}=n_{ik}-j^{sa}-k_2)} \binom{n_{sa}}{n_{sa}} \sum_{n_{sa}+j^{sa}-j_i-k_3}^{(n_{sa}+j^{sa}-j_i-k_3)} \binom{n_{sa}+j^{sa}-j_i-k_3}{n_{sa}}$$

$$\frac{(n_{sa}-k_1-k_2-k_3)!}{(n_{sa}-k_1-k_2-k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{zS} \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa} (l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n}^{l_i-k+1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{n_s=n-j_i+1} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa}-k_2)!(n_{sa}+j_{sa}^{ik}-j_{ik}-k_3)!}{(j_s-2)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{is}-j_s-k-1)!}{(j_{ik}-j_s-k-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik})! (n_{sa}-1)!}{(j^{sa}+j_{sa}^{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_s-k-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}
 \end{aligned}$$

GÜLDENWALD

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1) \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} (l_i-k+1) \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n (n_i-j_s+1) \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_i} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})^{j_{sa} - l_{ik}} \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^n \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{\substack{(l_{sa}-i^{l+1}) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{\substack{l_i-i^{l+1} \\ j_i=l_i+n-D}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_{ik}-l_{k_1}+1) \\ (n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_i - j_{sa})!}{(j_{sa} + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_i - j_{sa} - s)!}{(j^{sa} + l_i - j_i - l_i - j_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{lk} - j_{sa}}^{(l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{()} \sum_{j_i = j^{sa} + s - j_{sa}}^{()} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{()} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}^{()} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZMÜKAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \in z^s j_s, j_{ik}, j_{sa}^{ik} &= \sum_{k=1}^{i^{L-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\ &\sum_{j_{ik}=j_{sa}^{ik}+1}^{sa+j_{sa}^{ik}-j_{sa}} (l_i+n+j_{sa}-D-s-1) \sum_{(j^{sa}=l_{sa}+n-D)}^{l_i-k+1} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{i^{l-1}}$$

$$\sum_{j_{sa}^{ik}+1}^{j^{sa}-j_{sa}^{ik}-j_{sa}} \sum_{l_i+n+j_{sa}-D-s}^{(l_s-j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜMÜYA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l_{ik}-1} \sum_{j_{ik}=j_s+1}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j^{sa}=l_s-j_s-k+1)} \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-1}^{(n_{is}+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{(n_{ik}+1)} \sum_{j_{ik}-j^{sa}-l_{k_2}}^{s+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDENMYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} (j_s = 1)$$

$$\sum_{j_i = l_i + n - D}^{(j_s = l_{sa} + j_{sa}^{ik})} (j_s = 1)$$

$$\sum_{j_i = n + k_2 + k_3 - j_{ik} + 1}^{(j_s = 1)}$$

$$\sum_{n_s = n - j_i + 1}^{(j_s = 1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{ik}+1}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{(\cdot)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_3)}^{(\cdot)} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3)! \cdot (j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$
 $l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$
 $D - n - 1 < l_i \leq D - l_s + s - 1 \wedge$
 $n \geq n < n \wedge I = k > 0 \wedge$
 $j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$
 $s \geq 5 \wedge s = s + k \wedge$
 $k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_i+n+j_{sa}^{lk}-D-s-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-n_{sa}-1)!(n_i+j^{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})!(j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})!(j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{lk}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{\substack{(l_{sa}-i^{l+1}) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{\substack{l_i-i^{l+1} \\ j_i=l_i+n-D}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_{ik}-l_{k_1}+1) \\ (n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}}
 \end{aligned}$$

GÜLDENSA

$$\begin{aligned}
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - l_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_3 - 1)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})!}{(l_s + j_{sa} - j^{sa} - l_i - j_{sa})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_i - l_s)! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_1}^n \sum_{(n_{is}=n+l_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_{is} - s - l_1 - l_2 - l_3)!}{(n_{is} + j_s - n - l_1 - l_2 - l_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZMÜKAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \sum_{z=1}^s S_{j_s, j_{ik}, j_{sa}^{ik}} &= \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\ &\sum_{j_{ik}=j_{sa}^{ik}+1}^{n+j_{sa}^{ik}-D-s-1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \end{aligned}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(n - l_i)!}{(n - j_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{i^{l-1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-D}^{l_s-j_{ik}-k} \sum_{j_i=j_{sa}^{ik}+S-j_{sa}}^{(i-k+1)} \sum_{j_i=j^{sa}+S-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_{is}=n+\mathbb{k}_2-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{j_i} \binom{j_i}{k} \binom{l_i - l_{i+1} + k}{k} \binom{l_i - l_{i+1}}{j_i - k} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{n - j_{ik} - \mathbb{k}_1 + 1} \binom{n - j_{ik} - \mathbb{k}_1 + 1}{j_{ik} - j_{sa}^{ik} - \mathbb{k}_2} \binom{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}{j_{ik} - j_{sa}^{ik} - \mathbb{k}_2} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n - j_{ik} - \mathbb{k}_1 + 1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-l_{k_1}}^{(n_i-j_s+1)} \sum_{(n_{is}-s-l_{k_1}-l_{k_2}-l_{k_3})}^{(n_i-j_s+1)} \frac{(n_{is}-s-l_{k_1}-l_{k_2}-l_{k_3})!}{(n_{is}+j_s-n-l_{k_1}-l_{k_2}-l_{k_3})! \cdot (j_{sa}^s)! \cdot (j_{sa}-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_s \leq D + l_i + s - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (l_i + n - D - s)} \sum_{(j_s=2)}^{(l_{sa}-k+1)} \sum_{(j_i=l_i+n)}^{l_i-k+1} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{(j_i=l_i+n)}^{l_i-k+1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j_{i3}=j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(j_i=l_i-k_3)}^{(n_{sa}=n+k_3-j^{sa}-1)} \sum_{(n_s=n-j_i)}^{(n_{sa}=n+k_3-j^{sa}-1)} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(l_{sa}-k+1)}^{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}} \sum_{l_i-k+1}^{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=i}^{\binom{D-l_i}{i}} \sum_{l \binom{D-l_i}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(l_{sa}-l+1)}^{j^{sa}=l_{sa}+n-D} \sum_{l_i-l+1}^{j_i=l_i+n-D}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - j_i)!}{(n_s - j_i - n - j_i)!} \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j_{sa})!}{(l_{sa} + j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_i + j^{sa} - l_{sa} - s)!}{(l_{sa} + l_i - j^{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}
 \end{aligned}$$

GÜLDEN

A

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - j^{sa} - 1)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{l_i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{n}{j_{ik}}} \sum_{j_i=j_i}^{\binom{n}{j_i}} \sum_{j_s=1}^{\binom{n}{j_s}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{n}{j_{ik}}} \sum_{j_i=j_i}^{\binom{n}{j_i}} \sum_{j_s=1}^{\binom{n}{j_s}} \\
 & \sum_{n_i=n+l_k}^{\binom{n}{n_i}} \sum_{(n_{ik}=n+l_k+l_3-j_{ik}+1)}^{\binom{n_i-j_{ik}-l_1+1}} \\
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{\binom{n_{ik}+j_{ik}-j^{sa}-l_2}} \sum_{(n_{sa}+j^{sa}-j_i-l_3)}^{\binom{n_{sa}+j^{sa}-j_i-l_3}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZYAN

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_s)}^{()} \sum_{(j_i=j^{sa}-j_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_{sa} - s - k_1 - k_2 - k_3)!}{(n_{is} + \dots)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s < n \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{j_i = s}^{l_s + s - k} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{sa} = n + k_3}^{n_{ik} + j_{ik} - j^{sa} + j_i - k_3} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{j_i = l_s + s - k + 1}^{l_i - k + 1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{(\cdot)} \sum_{j_i = s}^{l_i - i + 1}$$

$$\sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_{ik} - k_1 + 1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}}$$

$$\sum_{n_{sa} = n + k_3 - j^{sa} + 1} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}}$$

GÜLDÜSÜZ

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_{sa}-j_{sa}}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{i^{l-1}} \sum_{j^{sa}=j_i+j_{sa}-s}^{()} \sum_{j_i=s+1}^{l_s+s-k} \sum_{i=n+\mathbb{k}_1}^n \sum_{n_{is}=n+\mathbb{k}_1-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=i}^{()} \sum_{j_s=1}^{()}$$

GÜLDÜMNA

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j_i-j-k_3)}$$

$$\frac{(n_i + j_s - s - k_1 - k_2 - j_s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa})! \cdot (n - s)!}$$

$D \geq n < n \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_s - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} \leq l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^i = j_{sa}^{ik} - 1$

$s: \{j_{sa}^{i-1}, j_{sa}^{ik}, k_2, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k_z: 2 \leq k_z \leq 3 \wedge k = k_1 + k_2 + k_3$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3 - 1)!} \cdot \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_s+j_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - l_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{D}{k}} \sum_{l=1}^{\binom{D-k}{l}} \\
 & \sum_{i_k=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{sa}-i_{l+1})} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()}$$

$$\sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}}^{(l_s + j_{sa} - k)} \sum_{(j_{sa} = j_{sa} + 1)}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n_i + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_i - j_{ik} - k_1)}^{()}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2)}^{()}$$

$$\frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} - j_s - n_{ik} - k_1 - k_2 - k_3 - a)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{()}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{ik} = n_i - j_{ik} - k_1 + 1)}^{()}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2}^{()}$$

GÜLDÜZMAYA

$$\frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$S: j_{sa}^s, j_i = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (j_i - 1)!} + \\
 & \sum_{j_s=2}^{l_i-1} \sum_{j_{ik}=j_s}^{l_s-k+1} \sum_{j_{sa}=j_s}^{l_{ik}-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{n_i-j_s} \sum_{j_{is}=n+\mathbb{k}-j_s+1}^{n_i+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_2} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}}^{()}$$

$$\sum_{j_i=j_{sa}}^{n} \sum_{j_i=j_{sa}}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=k_3-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \sum_{(n_{sa}+j_i-k_3)}^{(n_{sa}+j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - j_s - j_{sa}^{ik} + 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_{sa}^{ik} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}^{()}$$

GÜLDÜMBA

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=i}^{(\quad)} l_i^{(j_s=1)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
& \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k)} \sum_{(j_s=2)}^{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-k+1} (j_{sa}=j_{ik}+j_{sa}^{ik}-j_{sa}^{ik}) j_i=j_{sa}+j_{sa}^{ik}-j_{sa}^{ik}$$

$$\sum_{n_i=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-1}^n (n_{is}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}-1) n_{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}$$

$$(n_{sa}=n_{sa}+j_{sa}^{ik}-j_{sa}^{ik}-1) n_s=n_{sa}+j_{sa}^{ik}-j_{sa}^{ik}-1$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDENWA

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(j^{sa}=j_{sa}-\mathbb{k}_3)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!} \cdot \frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n-\mathbb{k}_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-\mathbb{k}_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - s)!} \\
& \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (j_i - s)!} \\
& \sum_{k=i}^{()} \sum_{j_s=s}^{()} \\
& \sum_{=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \\
& \sum_{=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \\
& \sum_{sa=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{()} \\
& \frac{(l + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(j_{sa}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j_i=n-D}^{(l_s+s-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_3-j_{ik}+1}^{(n_{ik}=n+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n+k_3-j_{sa}-k_2)}^{(n_{ik}=n+k_3-j_{sa}-k_2)} \sum_{j_i=k_3}^{(j_i=k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_i - k + 1} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j^{sa} = j_i + j_{sa} - s)} \sum_{(j_i = l_s + s - k)}^{l_i - k + 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j_{sa} - 1)}^{(n_{ik} + j_{ik} - j^{sa} - 1)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j_{sa} - j_{ik} - k_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(i)} \sum_{(j_s=1)}^{l_i - i^{l+1}} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j^{sa} = j_i + j_{sa} - s)} \sum_{(j_i = l_i + n - D)}^{l_i - i^{l+1}}
 \end{aligned}$$

GÜLDENWALD

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - j_i - n - \mathbb{k}_3 - 1)!}{(n_s - j_i - n - \mathbb{k}_3 - 1)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_i}^{a, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s + j_{sa} - k)} \sum_{j_{ik}=j_{sa}^{ik} - \mathbb{k}_2 - j_{sa}}^{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i=j_{sa}^s + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{i_s}=n + \mathbb{k} - j_s + 1}^{(n_{i_s} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa}=n + \mathbb{k}_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{n_s=n - j_i + 1}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_s=2}^{l-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_i+j_{sa}-s+1)} \sum_{j_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{j_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} l$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_i+j_{sa}-i^{l-s+1})} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_{sa}=n-k_3-j_{sa}+1}^n \sum_{(n_{ik}+j_{ik}-k_2-j_i-k_3)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_s - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

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$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_2} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^s)! \cdot (n+j_s-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-1)! \cdot (s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_{ik} < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, k_1, j_{sa}^s - k_2, j_{sa}^s - k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + 1$$

$$k_z: z = 1 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k-s+1}^{l_i+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - l_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=i}^{(\quad)} \sum_{l=(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+1}^{l_i+j_{ik}} \sum_{j_{sa}=D-s}^{l-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{ik}-k} \binom{()}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{n_i=n+k, j_s=j_{ik}-k_1}$$

$$\binom{()}{(n_{sa}=n_{ik}+j_{sa}-k_2)} \sum_{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_{sa}+j_{sa}-k_1-k_2-k_3)!}{(n_{sa}+j_{sa}-k_1-k_2-k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{lk} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{lk} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_s + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-\mathbb{k}-\mathbb{k}_1}^{n_{is}+j_s-\mathbb{k}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-j_{sa}^{ik})}^{(n_{sa}+j^{sa}-j_{sa}^{ik})}$$

$$\frac{(n_i - n_{is})!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - n_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

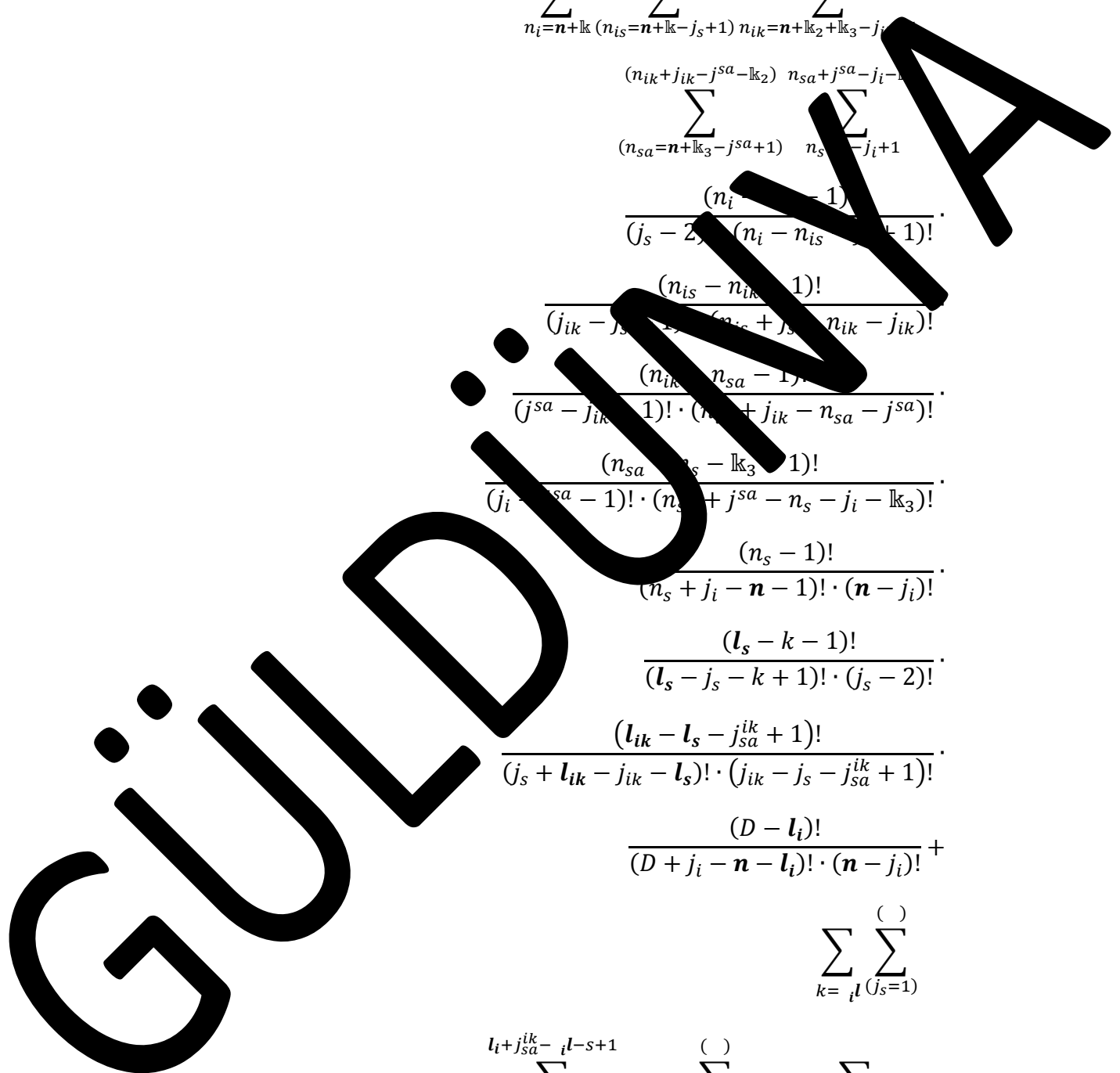
$$\sum_{k=1}^{l-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-k-s+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-k_3-1)!}{(j_i-j_{sa}-1)!(n_{is}+j_{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s=1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}
 \end{aligned}$$



$$\begin{aligned}
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - l_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_3 - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - 1)! \cdot (n_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+n-s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_s+j_{sa}^{lk}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_1}^n \sum_{(n_{is}=n+l_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_{is} - s - l_1 - l_2 - l_3)!}{(n_{is} + j_s - n - l_1 - l_2 - l_3 - j^{sa})! \cdot (n + j^{sa} - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^i \sum_{s=2}^{(l_s - k + 1)} \frac{(l_s - k + 1)!}{l_{sa} + s - 1 + 1} \\
 & \sum_{j_{ik} = j_{sa} + j_{sa}^{ik}} \sum_{j_{sa} = j_i + j_{sa} - j_{sa}^{ik}} \sum_{j_i = l_s + s - k + 1} \\
 & \sum_{n_i = n + k}^{(n_i - j_{ik} + 1)} \sum_{n_{is} = n + k - j_s + j_{ik} - k_1}^{(n_{is} + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1} \\
 & \sum_{(n_{ik} - j_{sa} - k_2)}^{(n_{ik} - j_{sa} - k_2)} \sum_{(n_{sa} = k_3 - j_{sa} + 1)}^{(n_{sa} = k_3 - j_{sa} + 1)} \sum_{n_s = n - j_i + 1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{\binom{D-l_i}{D+l_s+s-n-l_i}} \sum_{j_s=1}^{\binom{D-l_i}{j_s=1}} \\
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{D-l_i}{j_{sa}=j_i+j_{sa}-s}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{sa}+s-i-l-j_{sa}+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{n_i-j_{ik}-l_{k_1}+1}{n_{ik}=n+l_{k_2}+j_{ik}-j_{ik}+1}}^{(n_i-j_{ik}-l_{k_1}+1)} \\
 & \sum_{n_{sa}=n+l_{k_3}-j_{sa}} \sum_{\binom{n_s-n-j_i+1}{n_{ik}+j_{ik}-j_{sa}-l_{k_2}-j_{sa}-l_{k_3}}} \\
 & \frac{(n_{ik}-j_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-l_{k_1}+1)!} \cdot \frac{(n_{ik}-j_{ik}-1)!}{(j_{sa}-j_{ik}-l_{k_2}-j_{sa}-l_{k_3})! \cdot (n_{ik}+j_{ik}-j_{sa}-n_{sa}-j_{sa})!} \\
 & \frac{(n_{sa}-j_{sa}-l_{k_3}-1)!}{(j_i-j_{sa}-1)! \cdot (n_i+j_{sa}-n_s-j_i-l_{k_3})!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{\binom{D-l_i}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{D-l_i}{j_{sa}=j_i+j_{sa}-s}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n + 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, l_i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{(l_s - k + 1)} \\
 & \sum_{j_{ik}=j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_{sa} - k + 1)} \sum_{(j^{sa}=l_s + j_{sa} - k + 1)} \sum_{j_i=j^{sa} + s - j_{sa}}^{(l_{sa} - k + 1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
 & \sum_{j_{sa} = j^{sa} + j_{sa}^{lk} - j_{sa}}^{(l_{sa} - l_i + 1)} \sum_{j_{ik} = l_{sa} + n - D}^{(j_s)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_s = 1)} \\
 & \sum_{n_i = n + \mathbb{k}_1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \\
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}
 \end{aligned}$$

GÜLDÜM YA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_{sa}+n-D)}^{()} \sum_{j_{ik}=j_{sa}^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{()} \sum_{j_{sa}-j_i-k_3} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - 1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j^{sa}+1)}$$

$$\sum_{j_{ik}=l_{sa}+n+j^{ik}_{sa}-D-j_{sa}}^{l_s+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \dots -j_{ik}+1$$

$$(n_{ik}+j_{ik}-j^{sa}-k_2) \dots +j^{sa}-j_i-k_3$$

$$(n_{sa}=n+k_3-j_{sa}+1) \dots n_s=n-j_i+1$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j^{ik}_{sa}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j^{ik}_{sa}+1)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j^{ik}_{sa}-k+1}^{l_{sa}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-i^l-j_{sa}+1} \sum_{(j_s=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_{ik}-l_{k_1}+1) \\ (n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}} \\
 & \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-l_{k_2} \\ n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\substack{(n_{sa}+j^{sa}-j_i-l_{k_3}) \\ (n_s=n-j_i+1)}}
 \end{aligned}$$

GÜLDÜSÜMÜR

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa}^{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{j_{ik} = l_{sa} - j_{sa}^{ik} - D - j_s}^{l_s - k} \sum_{j_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(j_{sa}^{ik} - j_{sa}^{ik})} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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$$fz^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{i^{l-1}(l_{sa} + j_{sa})} \sum_{(j_s=2)}^{(j_s-1)}$$

$$l_{sa} - k - j_{sa} + 1 \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{(j_{sa}=j_{ik}+j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}}^{(j_i=j_{sa}+s-j_{sa})}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n+k_1+s+1)}^{(n_i-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{()}{(j_{sa}=j_s+j_{sa}^{ik}-j_{sa})} \\
 & \sum_{n_i=n+\mathbb{k}_1}^n \frac{(n_i-j_s+1)!}{(n_{is}=n+\mathbb{k}_1-j_s+1)!} \frac{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)!}{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)!} \\
 & \sum_{(n_{ik}+j_{sa}^{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{sa}^{ik}-\mathbb{k}_2)} \frac{(n_{sa}+j_s-j_i-\mathbb{k}_3)!}{(n_{sa}+j_s-j_i-\mathbb{k}_3)!} \\
 & \sum_{(n_{sa}+j_{sa}^{ik}-\mathbb{k}_3-j_{sa}^{ik})}^{(n_{sa}+j_{sa}^{ik}-\mathbb{k}_3-j_{sa}^{ik})} \frac{(n_s=n-j_i+1)!}{(n_s=n-j_i+1)!} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{D-l}{j_s=1}}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-l-j_{sa}+1} \sum_{\binom{D-l}{j_s=1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{n_i-j_{ik}-k_1+1}{n_{ik}=n+k_2+j_{ik}+1}} \sum_{\binom{n_{ik}+j_{ik}-j^{sa}-k_2}{n_{sa}=n+k_3-j^{sa}}} \sum_{\binom{j^{sa}-j_{sa}-k_3}{n_s=n-j_i+1}}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}+1)!} \cdot \frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-k_3-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{D-l}{j_s=1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{n_i-j_s+1}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \binom{(\quad)}{\quad} (n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq \dots \leq \dots$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \dots \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + \dots \wedge$$

$$k_z: z = 3 \wedge \dots = k_1 + \dots + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \dots$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_{ik}+s+n-D-j_{sa}^{ik}} \binom{(\quad)}{\quad} \binom{l_s+s-k}{\quad}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{(\quad)}{(j^{sa}=j_i+j_{sa}-s)}} \sum_{j_i=l_s+s-k+1}^{l_{ik}+s-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(n_i - j_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
 & \sum_{j_{ik}=j_i}^{(n_i - j_i - 1)!} \sum_{j_{sa}^{ik}=j_{sa} - j_{sa}}^{(n_i - j_i - 1)!} \sum_{j_i=l_{ik}+s+n-D-j_{sa}^{ik}}^{(n_i - j_i - 1)!} \sum_{j_s=1}^{(n_i - j_i - 1)!} \\
 & \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)!}{n_i = n + \mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)!} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_{ik}+n-D-j_{sa}^{ik}}^{l_s+s-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{is}=n_{ik}+j_s-k_2)}^{()} \sum_{(n_{is}=n_{ik}+j_s-k_3)}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa}^{ik} - n - l_{ik} \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^{ik} - 1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{j_{i_k} = j^{s_a} + j_{s_a}^{i_k} - j_{s_a}} \sum_{(j^{s_a} = l_{i_k} + n + j_{s_a} - D - j_{s_a}^{i_k})}^{(l_{i_k} + j_{s_a} - i^l - j_{s_a}^{i_k} + 1)} \sum_{j_i = j^{s_a} + s - j_{s_a}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1)}^{(n_i - j_{i_k} - k_1 + 1)} \sum_{n_{s_a} = n + k_3 - j^{s_a} + 1}^{n_{i_k} + j_{i_k} - j^{s_a} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{s_a} + j^{s_a} - j_i - k_3)}$$

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$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l_s + s - n - l_i} \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_s + s - n - l_i - k} \sum_{j_{ik} = j^{sa} + s - j_{sa}}^{l_s + s - n - l_i - k} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_s + s - n - l_i - k} \sum_{i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{i=1}^{i-l-1} \sum_{(j_s=2)}^{(k+1)}$$

$$l_s + j_{sa}^{ik} - k$$

$$j_{ik} = l_{ik} + n \quad (j_{sa} = j_{ik} + j_{sa}^{ik}) \quad j_i = j_{sa} + s - j_{sa}$$

$$\sum_{n_i=n}^n \sum_{(n_i=n+1)}^{(n_i-j_i-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_s+j_{sa}-j_{sa}^{ik})} \dots \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-k_1)} \\
 & \sum_{(n_{ik}+j_{sa}-k_2)} \sum_{(n_{sa}=n-j_i-k_3)} \\
 & \sum_{(n_{sa}+k_3-j_{sa}^{ik})} \sum_{n_s=n-j_i+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\sum_{k=1}^n \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l_i+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_{ik}-k_1+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_{ik}=n+k_2+j_{ik}+1)} \sum_{(n_{sa}=n+k_3-j_{sa})}^{(n_{sa}=n+k_3-j_{sa})} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_{ik}-j_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!} \cdot \frac{(n_{ik}-j_{ik}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{sa}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-j_{sa}-k_3-1)!}{(n_{sa}-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \binom{()}{(n_{is}-s-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3)!} \cdot \frac{(n_{is}+j_s-n-\mathbb{k}_1-\mathbb{k}_2-\mathbb{k}_3-j_{sa}^s)! \cdot (n+j_{sa}^s-j_s-s)!}{(l_s-k-1)! \cdot (l_s-j_s-k+1)! \cdot (j_s-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^i + 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})}$$

$$\sum_{j_{ik}=l_{ik}-k+1}^{l_{ik}-k+1} \binom{()}{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + \dots - n - 1)!}{(n_s + \dots - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{k-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(n_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{i=1}^{l_{ik} - i} \sum_{j_i=1}^{(n_i - l_i)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i - l_i)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2}^{l_{ik}-i} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s-k_1)} \sum_{(n_{is}=n_{ik}+j_{sa}-k_2)} \sum_{(n_{is}-k_3)}^{(j_i-k_3)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_i = D + s - n \wedge$

$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_s + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge k > 0$

$j_s - j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, \dots, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq j_{sa}^s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-j^{sa}-1)! \cdot (n_i+j^{sa}-n_s-j_i-l_{k_3})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s-k+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^n \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}^{(l_{sa}-i^{l+1})} l_{i-i^{l+1}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n_{sa} - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n_{sa} - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - 1)! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=0}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1}(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_2}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{is}-1)!(n_{is}+j_{is}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{i}} \sum_{l=1}^{\binom{D}{j_s}}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_{sa})}^{(l_{sa} - i + 1)} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_i - i + 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n_{sa} - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n_{sa} - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - 1)! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j_{sa}}^{()} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{k_1}^{()} \sum_{k_2}^{()} \sum_{k_3}^{()} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \leq l_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k; z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{l-1} \sum_{j_s=2}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_s+j_{sa}^{lk}-k} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{lk}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j_{sa})!} \\
 & \frac{(n_{sa}-l_{k_3}-1)!}{(j_i-j_{sa}-1)! \cdot (n_{is}+j_{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{lk}-k+1}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{lk}+s-j_{sa}}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{l_{ik}-l+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3 - 1)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j^{ik} + 1)! \cdot (l_i - j^{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZÜMKA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} l$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{j_{sa}}^{()} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z; z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{()}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}+1)! \cdot (n_{is}+j_{ik}-n_{sa}-j_{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-l_{k_3}+1)!}{(j_i-j_{sa}-1)! \cdot (n_{is}+j_{sa}-n_s-j_i-l_{k_3})!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \cdot$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{lk}}^{l_{ik}-i+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-i+1}$$

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - j_i - 1)!}{(n_s - j_i - n - j_i - 1)!} \cdot \frac{(l_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{sa} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(l_i + j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

GÜLDEN

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{ik}=j_{sa}} \sum_{j_i=s} \sum_{l_i=1}^{()} \sum_{l_s=1}^{()} \sum_{l_k=1}^{()} \sum_{l_{k_1}=1}^{()} \sum_{l_{k_2}=1}^{()} \sum_{l_{k_3}=1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-l_{k_1}-l_{k_2}-l_{k_3}} \sum_{n_{sa}+j_{sa}-j_i-l_{k_3}} \frac{(D + j_s - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa})!}{(D + j_s - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa} + 1 \wedge j_i + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa} \leq j_{ik} \leq j_i + j_{sa} - 1 \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + j_s + s - n - 1 \wedge$$

$$D > l_i \wedge n \wedge l_i = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik}=j^{sa} + j_{sa}^{ik} - j_{sa}}^{(j_i + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = l_i + n}^{l_s + s - k} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{i_3} = n - j_{i_3} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - j_{i_3} - k_3)} \\
 &\frac{(n_{sa} = n + k_3 - j_{sa} - 1)}{(n_s = n - j_i + 1)} \frac{(n_i - n_{i_3} - 1)!}{(j_s - 2)! \cdot (n_{i_3} - j_i + 1)!} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}
 \end{aligned}$$

GÜLDENYA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_s+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_s+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(\quad)} \sum_{i=l}^{(\quad)}
 \end{aligned}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i+1)} \sum_{j_i=l_i+n-D}^{l_i-i+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \\
 & \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - j_i - n - j_i - 1)!}{(n_s - j_i - n - j_i - 1)!} \\
 & \frac{(l_{ik} - j_{sa} - j^{sa} + 1)!}{(l_{ik} - j_{sa} - l_s + 1)! \cdot (j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{()} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}
 \end{aligned}$$

GÜLDÜZÜM

A

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

GÜLDÜNYA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j^{sa} - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i - j^{sa} - s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}+1)} \sum_{(j_{ik}=j_{sa}-k)}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(j_i=j^{sa}+s-j_{sa})} \sum_{(n_i=n+\mathbb{k}_2)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \\
 & \frac{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!}{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)!} \cdot \frac{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)!}{n_s = n - j_i + 1} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{j_s=2}^{l-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{l-k+1} \sum_{j_{ik}=j^{sa}+j_{sa}-k+1}^{l_{sa}-s+1} \sum_{j_{is}=n+l_k}^{n_i-j_s} \sum_{j_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\dots} \sum_{(j_s=1)}^{\dots}$$

$$\sum_{j_{ik}=j^{sa}}^{\dots} \sum_{(j_{sa}=l_{sa}+1)}^{\dots} \sum_{j_i=l_i+n-D}^{\dots}$$

$$\sum_{j_i=n+k}^{\dots} \sum_{(n+k_2+k_3-j_{ik}+1)}^{\dots}$$

$$\sum_{n_{ik}+j_{sa}-k_2}^{\dots} \sum_{(n_{sa}+j^{sa}-j_i-k_3)}^{\dots}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDENKAMM

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} (j_{sa}^{sa}=l_i+n+j_{sa}-D-s) \sum_{j_i=j_{sa}^{sa}+s-j_{ik}}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{()}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{lk}-k_2)}^{()} \sum_{(n_{sa}=n_{sa}+j_{sa}^{sa}-j_i)}^{()}$$

$$\frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa}^{sa})! \cdot (n_{is}-j_s-k_1-k_2-k_3)! \cdot (l_s-k-1)!}$$

$$\frac{(l_s-j_s-k_1-k_2-k_3+1)! \cdot (j_s-2)!}{(D-l_i)!}$$

$$\frac{(D-l_i)!}{(D-l_i-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{sa} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{lk} - j_{sa}^{ik} \leq j_{sa}^{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{sa} + j_{sa}^{lk} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \geq 1 \wedge l_{sa}^{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D - l_i - n < l_i \leq D - l_s + s - 1 \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^{sa} - 1 \wedge j_{sa}^{lk} < j_{sa}^{sa} - 1 \wedge j_{sa}^{sa} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{sa}, k_1, j_{sa}^{lk}, k_2, j_{sa}^{sa}, \dots, k_3, j_{sa}^{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=\mathbf{l}_{ik}+\mathbf{n}-D}^{\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s-1} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=\mathbf{l}_i+\mathbf{n}-D}^{\mathbf{l}_i-k+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2+\mathbf{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \\
 & \sum_{(n_{sa}=\mathbf{n}+\mathbf{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbf{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-\mathbf{k}_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{is}+j_{sa}-n_s-j_i-\mathbf{k}_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-\mathbf{n}-1)! \cdot (\mathbf{n}-j_i)!} \cdot \frac{(\mathbf{l}_s-k-1)!}{(\mathbf{l}_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-\mathbf{n}-l_i)! \cdot (\mathbf{n}-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{\mathbf{l}_s+j_{sa}^{ik}-k} \binom{(\quad)}{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}}^{\mathbf{l}_i-k+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1} \\
 & \sum_{(n_{s_a} = n + k_3 - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_i + j^{s_a} - n_{i_s} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k} = l_s + j_{s_a}^{i_k} - k + 1}^{l_{i_k} - k + 1} \sum_{(j^{s_a} = j_{i_k} + j_{s_a} - j_{s_a}^{i_k})}^{()} \sum_{j_i = j^{s_a} + s - j_{s_a}}^{l_i - k + 1}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{i_s} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + k_2 + k_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_{sa}-k_3-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+j_{ik}-j_{sa}^{ik}-1)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+1}^{j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{l_{ik}-k+1} \sum_{(j_s=2)}^{j_i+l-n-D-s} \\ & \sum_{j_i+l-n-D}^{l_{ik}-k+1} \sum_{(j_s=2)}^{j_i+l-n-D-s} \\ & \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_i - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=0}^{l_i - k} \sum_{j_s = l_i + n - D - s}^{l_i - k} \sum_{j_{ik} = j_s + j_{ik} - 1}^{l_i - k + 1} \sum_{j_{sa} = j_{sa} - j_{sa}^{ik}}^{l_i - k + 1} \sum_{j_i = j_i - j_{sa} + s - j_{sa}}^{l_i - k + 1} \sum_{n_i = n + k}^n \sum_{n_{is} = n + k_1}^{n_i + 1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{sa} = n + k_3 - j^{sa} - k_2}^{n_{ik} - j^{sa} - k_2} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \sum_{n_{sa} = n + k_3 - j^{sa} + 1} \sum_{n_s = n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_{is} - s - l_{k_1} - l_{k_2} - l_{k_3})!}{(n_{is} + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})! \cdot (n + j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - j_s - n - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{ik} + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_i = 0 \wedge$$

$$j_s < j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}, \dots, l_{k_3}, j_{sa}^{ik}\}$$

$$s \geq 5 \wedge l_s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+j_{sa}-s)}^{(j_{sa}=j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1} \\
 & \sum_{(n_{s_a}=n+k_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-k_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_k} + j^{s_a} - n_{s_a} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_i+j_{s_a}-s)} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1}$$

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$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_{sa} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=i}^{()} \sum_{l=(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

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$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j^{sa})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j^{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - j^{sa})! \cdot (j_{sa} + j_{sa} - j_{ik} - j^{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k}$$

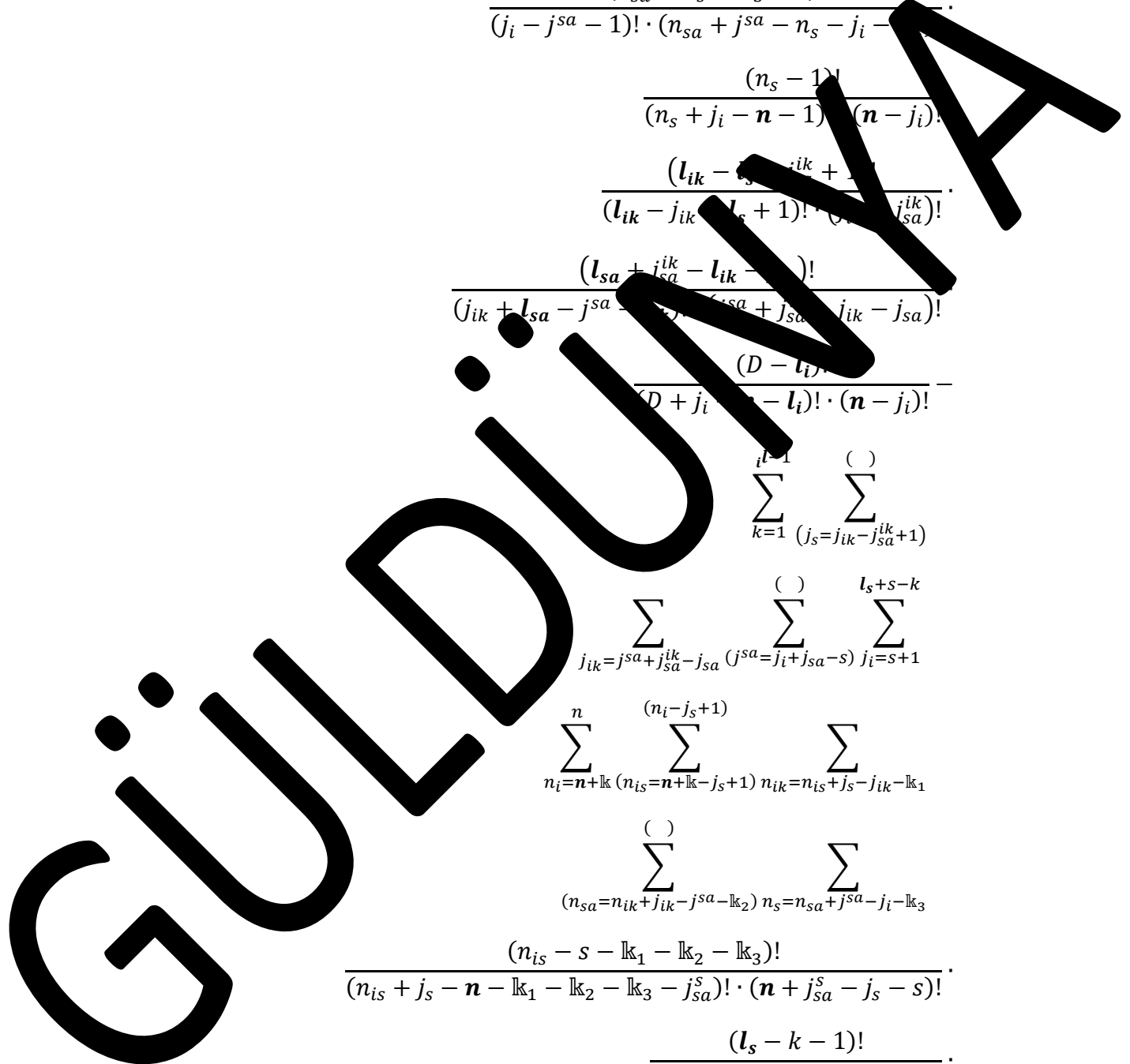
$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{()} \sum_{l \mid (j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i}^{()}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-l-k_1+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{()} \sum_{(n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - k_2 - k_3 - j_{sa}^s)!}{(n_i + j_s - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k_1 + k_2 + k_3 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = k_1 + k_2 + k_3 \wedge$$

$$k_2: k_2 \geq 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{j_i=j^{sa}+s-j_{sa}}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1} \\
 & \sum_{(n_{s_a}=n+k_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-k_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_k} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_{i_k} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=l_s+j_{s_a}-k+1)}^{(l_{s_a}-k+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1}$$

GÜLDENSA

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{(n_s=n-j_i+1)}$$

GÜLDÜZMAYA

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j^{sa} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{sa} - j_{ik} - j^{sa} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j_{sa} + j_{sa} - j_{ik} - j^{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{k=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

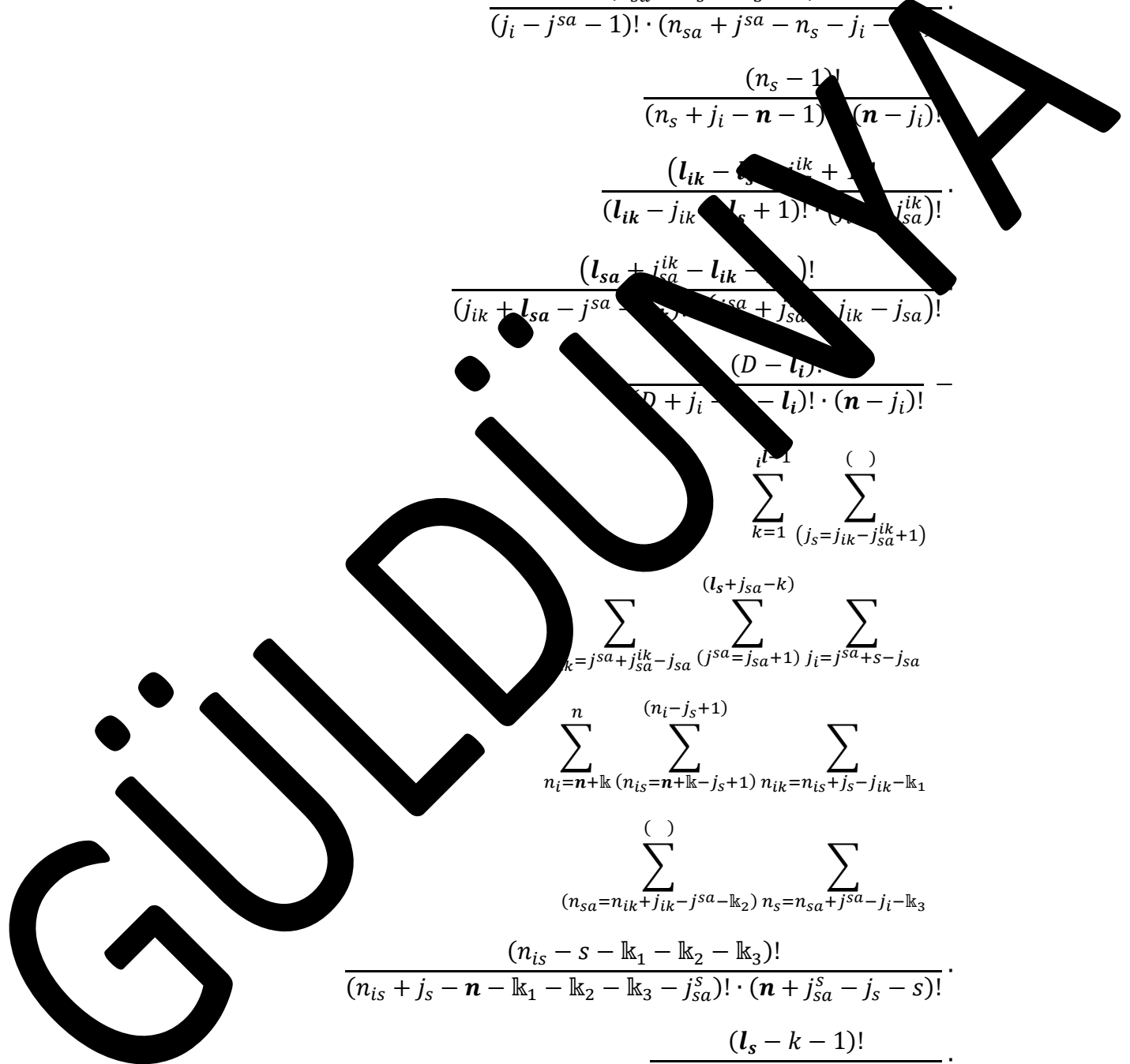
$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{()} \sum_{l_i}^{()} (j_s=1)$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i}^{()}$$

$$\sum_{n_i=n+l}^n (n_{ik}=n_i-l-k_1+1)$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{()} \sum_{(j^{sa}=n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - k_2 - k_3 - j_{sa}^s)!}{(n_i - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa} - j_{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n - l = k_1 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - j_{sa}^i \wedge j_{sa}^i - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = k_1 + k_2 \wedge$$

$$k_2: k_2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - k} \sum_{(l_{sa} - k + 1)}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1} \\
 & \sum_{(n_{s_a}=n+k_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-k_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} + j^{s_a} - n_{i_k} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_{i_k} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{i_k}=l_s+j_{s_a}^{i_k}-k+1}^{l_{i_k}-k+1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{(l_{s_a}-k+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1}$$

GÜLDENSA

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_{ik} - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{()} \sum_{l \binom{()}{j_s=1}}
 \end{aligned}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

GÜLDÜZMAYA

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{k=j_{sa}^{ik}+1}^{j_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}+s-j_{sa}}$$

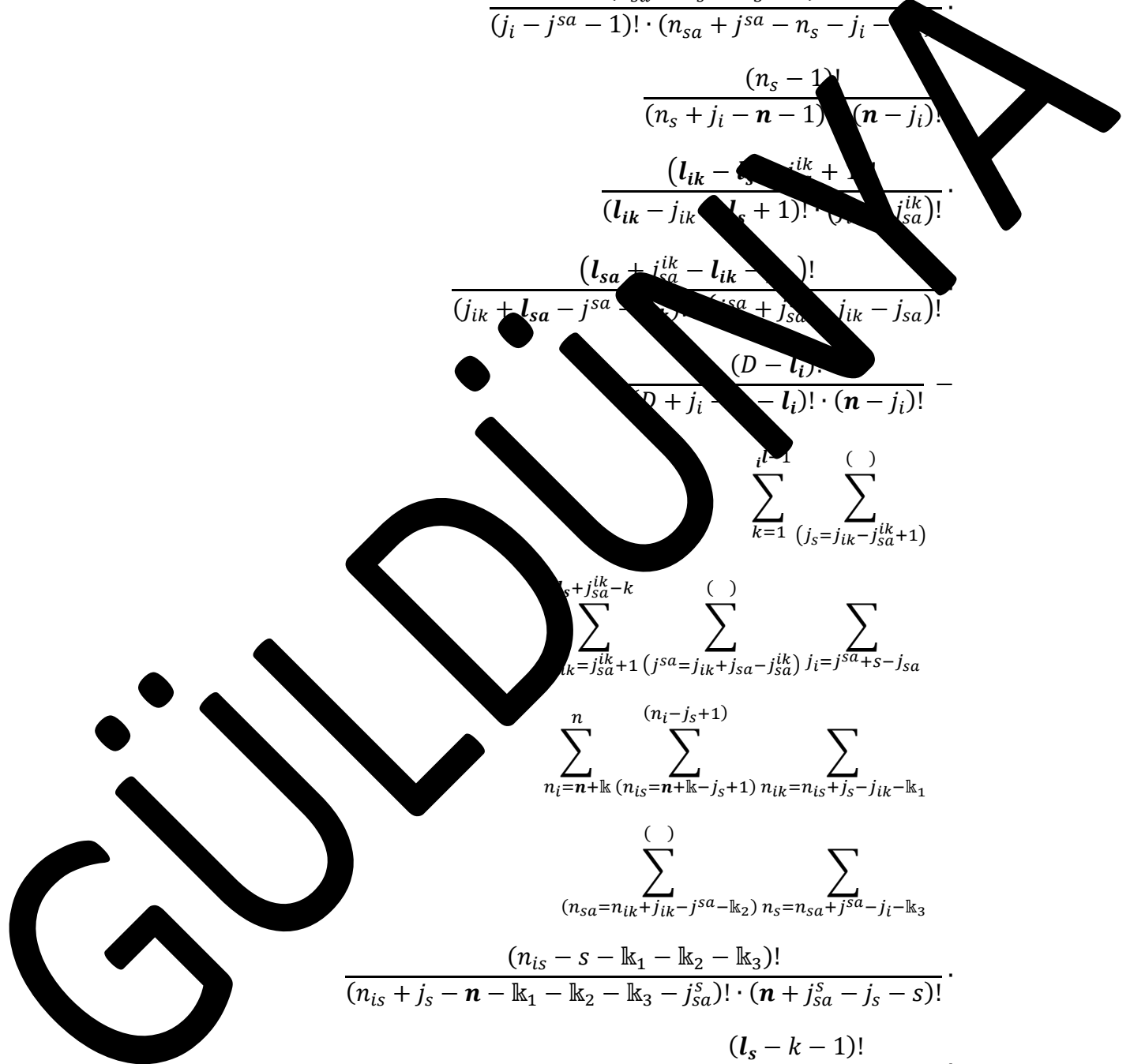
$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{()} \sum_{l_i}^{()} (j_s=1)$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{j_i}^{()}$$

$$\sum_{n_i=n+l}^n (n_{ik}=n_i-l_{k_1}+1)$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{()} \sum_{(j^{sa}=n_{sa}+j^{sa}-j_i)}^{()}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i) \cdot (n - s)!}$$

$$D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s \leq j_{sa} - 1 \leq j_s \leq j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_2}: l_{k_2} \geq 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{()}$$

$$\sum_{j_{ik}=j_s + j_{sa}^{lk} - 1}^{l_{ik} - k + 1} \sum_{(j^{sa}=j_{ik} + j_{sa} - j_{sa}^{lk})}^{(l_{sa} - k + 1)} \sum_{j_i=j^{sa} + s - j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{()} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

GÜLDÜSÜZ

$$\frac{\sum_{n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(j_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{ik} + 1)! \cdot (j_{ik} - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{ik} - j_{sa})! \cdot (j^{sa} + j_{ik} - j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZÜMKA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=1}^n \sum_{\mathbb{k}} (n_{ik}=n_i - j_{ik} + 1)$$

$$\frac{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge n - a + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D - l_s + s - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=l_s+s-k+1}^{l_i-k+1}
 \end{aligned}$$

GÜLDÜZ

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{()} \sum_{l=(j_s=1)}^{()}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-i^{l+1}} \sum_{(j^{s_a}=j_i+j_{s_a}-s)}^{()} \sum_{j_i=l_i+n-D}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(j_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} + 1)! \cdot (j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa} + 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_i + n - D}^{l_s + s - k} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{sa})! \cdot (n + j^{sa} - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZÜMKA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_i}^{a, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s + j_{sa} - k)} \sum_{j_{ik} = \dots + n - D}^{j_{sa}^{ik} - j_{sa}} (j^{sa} = l_i + n + j_{sa} - D - s) \sum_{j_i = j^{sa} + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{i_s} = n + \mathbb{k} - j_s + 1}^{n_{i_s} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{i_k} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)} \sum_{n_s = n - j_i + 1} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{ik})!} \cdot \frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_s + 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i - j_s - k + 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i - j_s - k + 1} \sum_{(j_s=2)}^{i - k + 1} \\
 & \sum_{k=l_{ik}+n}^{i-k+1} \sum_{s=l_s+j_{sa}-k+1}^{(l_i+j_s-k-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{i-k-s+1} \\
 & \sum_{n+l_{ik}}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{j_s} \binom{()}{j_s - k} \\
 & \sum_{j_{ik}=l_{ik}+n-1}^{l_{ik}-l+1} \sum_{j_{sa}=l_i+n-1}^{j_{sa}+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{D-s} \sum_{n_i=n-k}^n \sum_{j_{ik}-k_1+1}^{j_{ik}-k_1+1} \\
 & \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{j_{ik}-j^{sa}-k_2}^{j_{ik}-j^{sa}-k_2} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-k_3} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(n_i-j_s+1)} \sum_{j_{ik}=n_i+n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_{is}=n+k)} \sum_{(n_{ik}=n_{is}+j_s-k_1)}^{(n_{ik}=n_{is}+j_s-k_2)} \sum_{(n_{ik}=n_{is}+j_s-k_3)}^{(n_{ik}=n_{is}+j_s-k_3)} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_i + s - n - 1 \wedge$$

$$D > l_i \wedge n \wedge I = k > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa} - 1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j^{sa}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j^{sa}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j^{sa}+s}^{(n_i+n+j_{sa}-D-s-1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+k_3-j^{sa})}^{(n_{sa}+j^{sa}-n_{is}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{sa} + 1)!}$$

$$\frac{(l_{sa} + j^{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j^{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j^{sa}+1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}
 \end{aligned}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+k_2+k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-k_1} \\
 & \sum_{(n_{s_a}=n+k_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-k_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-k_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_s - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{i_s} + j^{s_a} - n_{s_a} - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{i_s} + j_i - n_{i_s} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{\binom{()}{}} \sum_{l \binom{()}{j_s=1}}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_{i_k}-i+1} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(l_i+j_{s_a}-i+1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_k}=n+k_2+k_3-j_{i_k}+1)}^{(n_i-j_{i_k}-k_1+1)}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - j_i - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{ik} + 1)! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{+j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()} \sum_{j_i = j^{sa} + s - j_{sa}}^{()} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{()} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}^{()} \\
 & \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜZÜMKA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_{zS}^{j_s, j_i} a, j_i &= \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\ & \sum_{j_{ik}=n-D}^{k+1} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(l_i+j_{sa}-k-s+1)} \sum_{j_i=j_{sa}^s+j_{sa}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} - 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{l-s} \sum_{j_s=j_s-s+1}^{(l_s-k+1)} \sum_{j_i=j_s+j_{sa}^{ik}-1}^{l_{ik}-k+1} \sum_{j_{sa}=j_{sa}-j_{sa}^{ik}}^{(l_i+j_{sa}-s+1)} \sum_{n_{is}=n+l_k}^{(n_i-j_{ik})} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k_3})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \sum_{(j_s=1)}^{(j_s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i+1} \sum_{(l_i+j_{sa}-j_{sa}+1)}^{(l_i+j_{sa}-j_{sa}+1)} \sum_{(j^{sa}+s-j_{sa})}^{(j^{sa}+s-j_{sa})}$$

$$\sum_{(n_i-1)}^{(n_i-1)} \sum_{(n+n+k_2+k_3-j_{ik}+1)}^{(n+n+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}+j_{sa}-k_2)}^{(n_{sa}+j_{sa}-k_2)} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}^{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

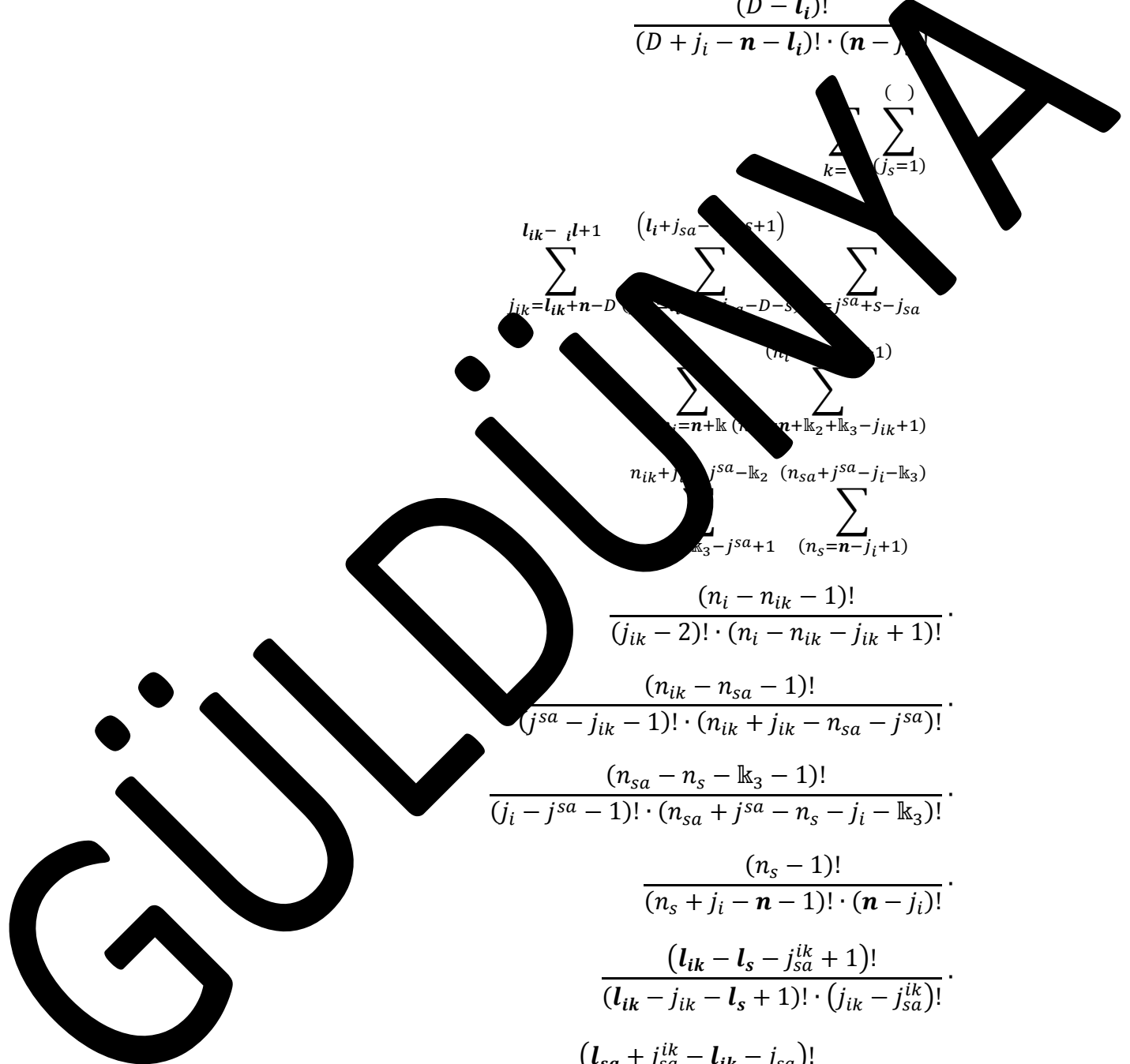
$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-1)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i}^{()} \frac{(n_{is}-s-k_1-k_2-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa})!} \frac{(l_s-k-1)!}{(l_s-j_s-k_1+1)! \cdot (j_s-2)!} \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s, j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} \geq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D - j_{sa} - n < l_{sa} \leq D + l_s + n - n - 1 \wedge$$

$$D \geq n - 1 \wedge I = k > 0$$

$$j_{sa} < j_{sa}^i - 1, j_{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1}(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{()} \dots$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \binom{(\quad)}{\quad} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-k} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-l_{k_3}-1)!}{(j_i-n_{sa}-1)! \cdot (n_{ik}+j^{sa}-n_s-j_i-l_{k_3})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \sum_{j_i=l_{sa}+n+s-k+1}^{l_{sa}+s-k-j_{sa}+1}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_i + j^{sa} - n_s - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=i}^{\binom{D}{i}} \sum_{l \binom{D}{j_s=1}}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - i^{l+1}} \sum_{\substack{(\binom{D}{j_s}) \\ (j^{sa} = j_i + j_{sa} - s)}} \sum_{\substack{l_{sa} + s - i^l - j_{sa} + 1 \\ j_i = l_{sa} + n + s - D - j_{sa}}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{(n_i - j_{ik} - k_1 + 1)}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - \mathbb{k}_3)!} \cdot \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(j_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (j_{ik} - j_{sa})!} \cdot \frac{(l_s + j_{sa} - j_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{ik} - j_{sa})! \cdot (j^{sa} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{()} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{()} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{()} \sum_{j_i = l_{sa} + n + s - D - j_{sa}}^{l_s + s - k} \\
 & \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDÜNKYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_i}^{a, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(l_s + j_{sa} - k)}^{(l_s + j_{sa} - k)} \sum_{i_k = l_{ik} + n - D}^{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(n_i - j_s + 1)} \sum_{n_{i_s} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{(n_{i_s} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{ik})!} \cdot \frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_s + 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i - j_s - k + 1} \sum_{(j_s=2)}^{i - j_s - k + 1} \\
 & \sum_{k=l_{ik}+n}^{i-k+1} \sum_{(i-k+1)}^{i-k+1} \sum_{j_i=j^{sa}+s-j_{sa}}^{i-k+1} \\
 & \sum_{n+l_{ik}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=i}^{j_s} \binom{()}{j_s - k}$$

$$\sum_{j_{ik}=l_{ik}-i}^{l_{ik}-i+l_s} \binom{()}{j_{ik}-i+l_s} \sum_{j_i=j^{sa}+s-j_{sa}}^{j^{sa}+s-j_{sa}+n-D} \binom{()}{j^{sa}+s-j_{sa}+n-D} \sum_{n_i=n-k}^{n-k} \binom{()}{n-k} \sum_{j_{ik}-k_1+1}^{j_{ik}-k_1+1} \binom{()}{j_{ik}-k_1+1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{n+k_3-j^{sa}+1} \binom{()}{n+k_3-j^{sa}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \binom{()}{n_s=n-j_i+1} \cdot$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=j_{sa}^{sa}+j_{sa}^{lk}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j_{sa}=l_{sa}+n-D)}^{()} \sum_{j_{ik}^{sa}+s-j_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-k_2)}^{()} \sum_{j_{sa}-j_i-k_3}^{()} \frac{(n_{is} - s - k_1 - k_2 - k_3)!}{(n_{is} + j_s - n - k_1 - k_2 - k_3 - j_{sa}^s)! \cdot (j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_s + 1 > l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n - l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$

$D > n < n \wedge I = k > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa} - 1, j_{sa}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^{\mathcal{S}}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa} - k + 1)} \sum_{j_i = j^{sa} + s}^{(n_{is} + j_s - j_{ik} - k_1)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{(n_{is} + j_s - j_{ik} - k_1)}$$

$$\frac{(n_{ik} + j_{ik} - j^{sa} + j_s - j_i - k_3)!}{(n_{sa} = n + k_3 - j_s + 1)! \cdot (n_s = n - j_i + j_s - j_{ik} - k_3)!}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-k_3-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i-k_3)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})!(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} + \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}
 \end{aligned}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

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$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - l_3)!} \cdot \\
 & \frac{(n_{sa} - n_s - l_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_3 - l_3)!} \cdot \\
 & \frac{(n_s - j_i - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_i - l_s - j_{ik} + 1)!}{(l_{ik} - j_{ik} - l_s - j_{ik} - 1)! \cdot (j_{ik} - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{i_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \\
 & \sum_{n_i=n+l_1}^n \sum_{(n_{is}=n+l_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1}^{()} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_3}^{()} \\
 & \frac{(n_{is} - s - l_1 - l_2 - l_3)!}{(n_{is} + j_s - n - l_1 - l_2 - l_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \epsilon_z S_{j_s, j_{ik}, j_{sa}^s} &= \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)} \\ &\sum_{ik=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_s - j_{sa})!} \cdot \\
 & \frac{(D - j_i - n + l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l-1} \sum_{j_s=l_s-k}^{l_s-k-1} \sum_{j_{sa}=j_s+1}^{j_s+1} \\
 & \sum_{j_s=j_s+j_{sa}^{ik}-1}^{l_{ik}-k+1} \sum_{j_s=j_s+j_{sa}^{ik}-1}^{l_{sa}-k+1} \sum_{j_i=j_s+j_{sa}^{ik}-j_{sa}}^{j_s+j_{sa}^{ik}-j_{sa}} \\
 & \sum_{n_{is}=n+l_k}^n \sum_{n_{ik}=n+l_k-j_s+1}^{(n_i-j_{ik})} \sum_{n_{is}+j_s-j_{ik}-l_{k1}}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{n_{sa}=n+l_{k3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+1}^{l_{ik}-i+1} \sum_{(l_{sa}+j_{sa}^{ik}+1)} \sum_{(n+l_{sa}+j_{sa}^{ik}-j_{sa})}$$

$$\sum_{(n_i-1)} \sum_{(n+l_{sa}+j_{sa}^{ik}-j_{sa})}$$

$$\sum_{(n_{ik}+j_{sa}^{ik}-l_{sa}-l_{sa}^{ik})} \sum_{(n_{sa}+j_{sa}^{ik}-j_i-l_{sa}^{ik})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - l_{sa}^{ik} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{sa}^{ik})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜMNYA

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-1)}^{(\)} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_{is}-s-j_{sa}-k_3)!}{(n_{is}+j_s-n-k_1-k_2-k_3-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$((D \geq n < n \wedge l_i \leq D + \dots - n \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$
 $l_i - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
 $(D > n < n \wedge l_s \leq \dots - n + 1$
 $\leq j_s \leq \dots - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} < j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$
 $l_i - s + 1 > l_s \wedge$
 $l_i \leq D + \dots - n)) \wedge$
 $D \geq n < n \wedge I = k > 0 \wedge$
 $j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, k_3, j_{sa}^i\} \wedge$
 $s \geq 5 \wedge s = s + k \wedge$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_1}^{n_{is}+j_s-k-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-j_s-\mathbb{k}_2)}^{n_{ik}+j_{ik}-j_s-\mathbb{k}_1} \sum_{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_i - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_s - k + 1} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \sum_{j_i=l_s+s-k}^{l_i-k+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{j_{i-1}=j_{ik}+1}^{j_{i-1}-j_{ik}+1} \\
& \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+k_3-j_{i-1})}^{(n_{sa}=n+k_3-j_{i-1})} \sum_{n_s=n-j_i}^{n_s=n-j_i} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
& \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
& \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
\end{aligned}$$

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$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \sum_{j_i=1}^{l_{i-1}^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}-j^{sa}-k_3)}$$

$$\frac{(n_{ik}-j_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!}$$

$$\frac{(n_{ik}-j_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+k_2-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-j^{sa}-k_3-1)!}{(n_{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{()} \sum_{j_i=s+1}^{l_s+s-k}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{i_s} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{i_s} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=i}^{(\quad)} l_i^{(j_s=1)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
& \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$((D \geq n < n) \wedge l_i \leq D + s - n \wedge$$

$$1 - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \epsilon_z S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{l-i-j_{ik}-j_{sa}^{ik}+1} \sum_{(j_s=2)}^{j_s} \\ &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}} \sum_{s_a=j_{sa}+1}^{(l_s+j_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\ &\sum_{n_{is}=\mathbb{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbb{n}+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=\mathbb{n}+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=\mathbb{n}-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - \mathbb{n} - 1)! \cdot (\mathbb{n} - j_i)!} \cdot \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
 & \frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{j_s=2}^{l-1} \frac{(l_s - k + 1)!}{(j_s - 2)!} \cdot \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k} \sum_{j_{sa}=j_{sa}^{ik}+1}^{(l_{sa}-1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_{is}=n+l_k}^{n_i-j_{sa}} \sum_{n_{ik}=n+l_k+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{(n_{sa}=n+l_{k3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k3} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^l \binom{()}{j_s = \dots}$$

$$\sum_{j_{ik}=j_s}^{l_{ik}-i+l+1} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_{sa}-i+l+1} \dots$$

$$\sum_{n_{ik}=n-k}^{j_{ik}-k_1+1} \dots$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+j_{sa}^{ik}-j_{sa})}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}$$

$$\frac{(n_i - s - k_1 - k_2 - k_3)!}{(n_i - j_s - k_1 - k_2 - k_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}^{()}$$

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$$\frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k}$$

$$\mathbb{k} = z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j_{sa}^s+s-j_{sa}}^{l_i-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}^s+1)}^{(n_{ik}+j_{ik}-j_{sa}^s-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^s-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (j_i - j_s)!} \cdot \\
 & \frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{sa} - s)!}{(j_s + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

GUIDANCE

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa} + 1)!} \cdot \frac{(j_{ik} + l_{sa} - j^{sa} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + l_{sa} - l_s)!}{(j^{sa} - l_i - j_i - l_s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i-i+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} - 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{k=j_{sa}^{ik}+1}^{j_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜNYA

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-l_{k_1}+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_i + j_s - l_{k_2} - l_{k_3} - j_{sa}^s)!}{(n_i + j_s - n - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_i \leq j^{sa} + j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge (l_i - j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_{sa} \wedge$$

$$l_i \leq (s - n)) \wedge$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 3 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{(l_s - k + 1)} \\
 &\sum_{j_{ik}=j_s + j_{sa}^{ik} - 1}^{l_{ik} - k + 1} \sum_{(j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)} \sum_{j_i=j^{sa} + s - 1}^{l_i - k + 1} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\frac{(n_{ik}+j_{ik}-j^{sa}-1)! \cdot (n_{is}+j_s-j_{ik}-k_3)!}{(n_{sa}=n+k_3-j_{sa}-1)! \cdot (n_s=n-j_i+k_3-1)!} \cdot \frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 &\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

GÜLDENWA

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-i^{l+1})} \sum_{j_i=j^{sa}+s}^{l_i-i^{l+1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_i-j_{ik}-1)!}$$

$$\frac{(n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i-k_3)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_{is} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)!}{(n_{is} + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n + j_s - j_s - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - 1)! \cdot (s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l_i}^{(\quad)} \sum_{j_s=1}^{(\quad)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\quad)} \\
& \frac{(n_i + j_s - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^s)! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & f_z = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\ & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-k} \\ & \sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - \mathbb{k}_3)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa})!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - l_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{i_s - k + 1} \sum_{(j_s=2)}^{i_s - k + 1} \\
 & \sum_{j_{ik}=l_{ik}}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{j_{sa}-k+1} \sum_{j_i=l_s+s-k+1}^{l_i-k+1} \\
 & \sum_{n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDENWA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{j_s=1}^{()} \sum_{j_{ik}=l_{ik}+n-l_{sa}}^{l_{ik}-i+1} \sum_{j_{sa}=l_{sa}+n-D}^{(l_{sa}-i+1)} \sum_{j_i=l_i+n-D}^{l_i-i+1} \sum_{n_i=n+l_k}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)} \sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_{k_2}} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

GÜLDÜZYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{j_s=j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1} \binom{D+l_s+s-n-l_i}{j_{sa}=j_i+s} \sum_{j_i=l_i+n-D}^k \binom{k}{j_i}$$

$$\sum_{n_i=n+l_k} \binom{k}{j_i} \sum_{n_i=n+l_k-j_s} \binom{k}{j_i} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \binom{k}{j_i}$$

$$\sum_{n_i=n+l_k} \binom{k}{j_i} \sum_{n_i=n+l_k-j_s} \binom{k}{j_i} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_2} \binom{k}{j_i} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i-k_3} \binom{k}{j_i}$$

$$\frac{(n_{is} + j_{sa}^{ik} - n - k_1 - k_2 - k_3)!}{(n_{is} + j_{sa}^{ik} - n - k_1 - k_2 - k_3 - j_{sa})! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}, j_i \sum_{j_s=1}^{i-1} \sum_{(j_s=2)}^{\mathbb{k}+1}$$

$$j_{sa}^{sa} + j_{sa}^{ik} - j_{sa}^{sa} + n + j_{sa}^{sa} - 1) \sum_{j_{ik}=l_{ik}+1}^{j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}^{sa}+n+j_{sa}^{sa}-1} \sum_{j_i=l_i+n-D}^{j_{sa}^{sa}+j_{sa}^{ik}-j_{sa}^{sa}+n+j_{sa}^{sa}-1-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n+\mathbb{k}_1+1)}^{(n_i-1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZÜMÜKAYA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s - j_{sa}^{ik} + 1)} \sum_{(j_i - k + 1)}^{(l_i - k + 1)}$$

$$\sum_{n_i=n-k}^n \sum_{(n_{is}=n+k_1+1)}^{(n_{is}+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GUIDANCE

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{j_s-1} \sum_{(j_s=2)}^{(j_s=k+1)}$$

$$l_{ik-k+1} \dots l_{i-k+1}$$

$$j_{ik} = l_{ik} \dots (j^{sa} = l_{sa} - k + 1) \quad j_i = j^{sa} + s - j_{sa}$$

$$\sum_{n_i = n - k_1}^n (n_{is} = n + k_1 + 1) \quad n_{ik} = n + k_2 + k_3 - j_{ik} + 1$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^l (j_s - k)$$

$$\sum_{j_{ik}=i}^{l_{ik}-l} \sum_{j_{sa}=i}^{l_{sa}+l+1} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=i-k}^n \sum_{j_{ik}=i-k}^{j_{ik}-k_1+1} (n_{ik}=n+k_2+k_3-j_{ik}+1)$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{k}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \binom{l_s+j_{sa}-k}{j^{sa}=l_i+n+j_{sa}-D-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \binom{n_i-j_s+1}{n_i=n+lk} \sum_{n_{ik}=j_s-j_{ik}-lk_1} \binom{n_i-j_s+1}{n_{ik}=j_s-j_{ik}-lk_1}$$

$$\sum_{(n_{sa}=n_{ik}-j^{sa}-lk_2)} \binom{n_{sa}+j^{sa}-j_i-lk_3}{n_{sa}=n_{ik}-j^{sa}-lk_2}$$

$$\frac{(n_i - s - lk_1 - lk_2 - lk_3)!}{(n_i - s - lk_1 - lk_2 - lk_3)! \cdot (n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_s + 1 > l_s - j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1) \vee$$

$$(D > n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, i} j_i = \sum_{k=1}^{l-1} \sum_{j_s=j_{sa}^{ik}+1}^{j_s} \sum_{j_{ik}=n-D}^{l_i+n+j_{sa}^{ik}-s-1} \sum_{j_{sa}=l_{sa}+n}^{l_{sa}-n} \sum_{j_i=j_s+1}^{l_i-k+1} \sum_{n=\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}_1+1}^{n_i-j_s+1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{i-1} \sum_{s=2}^{i-k-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{l_s+j_{sa}^{ik}-k} \sum_{i_{ik}=j_{sa}-j_{sa}^{ik}-j_{ik}}^{(l_{sa}+1)} \sum_{i_i=j_{sa}+s-j_{sa}}^{i_i}$$

$$\sum_{n_i=n+k}^{(n_i-1)} \sum_{n_{is}=n+k-j_s+1}^{(n_i-1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_i-1)-k_1}$$

$$\sum_{n_{sa}=n+k_3-j_{sa}+1}^{(n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_s-k+1} \sum_{s=2}^{l_s-k+1}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{lk}-k}^{l_{ik}-k+1} \sum_{j_{ik}=l_{ik}+j_{sa}-j_s}^{(l_s-k+1)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^{n_i+l_k+1} \sum_{n_i+l_k-j_s+1}^{(n_i+l_k+1)} \sum_{n_i+l_k+1}^{n_i+l_k+1-k_1}$$

$$\sum_{(n_{sa}=l_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{n_{sa}+j_{sa}-j_i-k_3}^{n_{sa}+j_{sa}-j_i-k_3} \sum_{(n_{sa}=l_{ik}-j_{sa}+1)}^{(n_{sa}=l_{ik}-j_{sa}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - k_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - k_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=1}^{(j_{sa})} \binom{(j_{sa})}{k}$$

$$\sum_{j_{ik}=l_{ik}-i+1}^{l_{ik}-i+1} \sum_{j_i=l_i+n-D}^{l_i+n-D} \binom{(j_{sa})}{k}$$

$$\sum_{n_i=n+l_k}^{n+l_k} \binom{(j_{sa})}{k}$$

$$\sum_{n_{sa}=n-l_3-j_{sa}+1}^{n_{sa}=n-l_3-j_{sa}+1} \binom{(j_{sa})}{k}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - l_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_3)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-l_{k1}}^{(n_i-j_s+1)} \sum_{(n_{is}+j_{sa}-l_{k2})}^{(n_i-j_s+1)} \sum_{(n_{is}+j_{sa}-l_{k3})}^{(n_i-j_s+1)} \frac{(n_{is} - s - l_{k1} - l_{k2} - l_{k3})!}{(n_{is} + j_s - n - l_{k1} - l_{k2} - l_{k3})! \cdot (j_{sa}^s)! \cdot (j_s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\ & D + s - n < l_i \leq D + l_s + s - n - 1) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_i - s + 1 > l_s \wedge \\ & D + s - n < l_i \leq D + l_s + s - n - 1) \wedge \\ & D \geq n < n \wedge l = k > 0 \wedge \end{aligned}$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{\mathcal{S}}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j_{sa}=n-D)}^{(l_s-k+1)} \sum_{j_i=l_i-D}^{k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n+i-1)}^{(i+1)} \sum_{n_{ik}=n}^{(j_{ik}+1)}$$

$$\sum_{(n_{sa}=n-\mathbb{k}_3-j_{sa}+1)}^{(i_k+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(i-2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - \mathbb{k}_3 - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - \mathbb{k}_3)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa}-k+1)} \sum_{(j_i=j_{sa}-j_{sa}^{lk})}^{(l_s-k+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k+l_{k3}-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-1} \\
 & \sum_{(n_{ik}+j_{sa}-l_{k2})}^{(n_{ik}+j_{sa}-l_{k2})} \sum_{(n_{is}=n+l_k+l_{k3}-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-1} \\
 & \sum_{(n_s=n+l_k+l_{k3}-j_{ik}+1)}^{(n_s=n+l_k+l_{k3}-j_{ik}+1)} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - l_{k3} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - l_{k3})!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{lk} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{lk} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-l+1)} \sum_{i=l_i+n-D}^{l_i-l+1} \\
 & \sum_{n_i=n+1}^n \sum_{n_k=n+l_{k_2}+l_{k_3}-j_{k_2}-j_{k_3}+1}^{(n_i-j_{ik}-l+1)} \\
 & \sum_{n_{sa}=j_{sa}-j_{sa}+1}^{(n_i-j_{ik}-l+1)} \sum_{i=l_i+n-D}^{l_i-l+1} \\
 & \frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - l_{k_3} - 1)!}{(j_i - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-lk_2)}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=n_{sa}+j_{sa}-j_i-lk_3}$$

$$\frac{(n_{is} - s - lk_1 - lk_2 - lk_3)}{(n_{is} + j_s - n - lk_1 - lk_2 - lk_3 - j_{sa}^{lk}) \cdot (n + j_{sa} - s)!} \cdot \frac{(j_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D)}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜMÜNYA

DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.2/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/2
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/228
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.2/203
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2/228

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.3/103
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3/228
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.4.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.4.2/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.2/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.2/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.4.3/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.3/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.3/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/207
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/236

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.2.1/207

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/236

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.3.1/207

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/236

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.1.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.2.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.3.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.1.1.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.1.1.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.1.1.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.1.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.2.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.2.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.2.2.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.2.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.2.3.1/3-4

toplam düzgün simetrik olasılık, 2.3.1.2.2.2.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.1.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.7.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.7.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.2.7.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.2.7.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.3.1/3-4

toplam düzgün simetrik olasılık,
2.3.1.2.2.7.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.2.7.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
ve herhangi bir durumunun bulunabileceği
olaylara göre

simetrik olasılık, 2.3.1.1.3.1.1.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.1.2.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.1.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.3.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.1.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin
herhangi bir durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.1.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin herhangi iki durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.2.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin herhangi iki durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.3.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin her
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.1.1/838

simetrik olasılık, 2.3.1.1.4.1.1.1/838

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız

simetrisinin her durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.2.1/838

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin her durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.3.1/838

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.2.1/6

toplam düzgün simetrik olasılık, 2.3.1.2.5.2.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.3.1/4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.2.1/12
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.8.2.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımsız-bağımlı durumlu
 bağımlı simetrisinin ilk ve herhangi iki
 durumunun bulunabileceği olaylara göre
 herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.3.1/8
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.8.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı durumlu simetrisinin ilk
 herhangi bir ve son durumunun
 bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.1.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.1.1.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.1.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı durumlu bağımsız
 simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.1.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.1.2.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.1.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı durumlu bağımlı
 simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.2.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.1.3.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.1.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımsız-bağımlı durumlu
 bağımlı simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.2.1.1/6
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.2.1.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.2.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımsız-bağımlı durumlu

bağımsız simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.2.2.1/6
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.2.2.1/3-4

toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.2.2.1/9

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımsız-bağımlı durumlu
 bağımlı simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.3.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.4.3.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.4.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı-bir bağımsız durumlu
 bağımsız simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.1.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.4.1.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.4.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı-bir bağımsız durumlu
 bağımsız simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.2.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.4.2.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.4.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı-bir bağımsız durumlu
 bağımlı simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.3.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.4.3.1/3-4
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.6.4.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı-bağımsız durumlu
 simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.1.1/4-5
 toplam düzgün simetrik olasılık,
 2.3.1.2.6.6.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.2.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.2.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun

bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.2.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.9.4.1.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.2.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.3.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.4.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.4.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.2.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.3.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.1.1/12

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.2.1/12
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.3.1/8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.1.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.2.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.3.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.1.1/7

toplam düzgün simetrik olasılık, 2.3.1.2.7.2.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.2.2.1/7

toplam düzgün simetrik olasılık, 2.3.1.2.7.2.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.2.3.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.2.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.4.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.4.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.4.2.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.4.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.4.3.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.4.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.6.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.6.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.6.2.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.6.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.6.3.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.7.6.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.7.1.1/7

toplam düzgün simetrik olasılık, 2.3.1.2.7.7.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.7.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.7.2.1/7

toplam düzgün simetrik olasılık, 2.3.1.2.7.7.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.7.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.7.3.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.7.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
herhangi iki ve son durumunun
bulunabileceği olaylara göre herhangi bir
ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.2.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.2.1/22

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.2.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.6.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.6.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.6.2.1/12-13
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.6.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.10.6.3.1/12-13
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.6.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.10.7.1.1/22
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.7.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.10.7.2.1/22
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.7.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.10.7.3.1/12-13
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.7.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
herhangi iki ve son durumunun
bulunabileceği olaylara göre herhangi iki
ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.1.1.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.1.1.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.2.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.1.2.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.3.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.1.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.2.1.1/29
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.2.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.2.2.1/29
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.2.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.2.3.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.2.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.1.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.2.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.1.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.2.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.1.1/29

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.2.1/29

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.3.1/17

VDOİHİ'de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ'de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlarında, simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu olasılığının ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılığın, tanım ve eşitlikleri verilmektedir.

VDOİHİ'nin diğer ciltlerinde olduğu gibi bu ciltte de verilen ana eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde dış kaynak kullanılmamıştır.

GÜLDÜNKAYA