

VDOİHİ

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

Cilt 2.3.1.3.3.1.1.1

İsmail YILMAZ



**Matematik / İstatistik / Olasılık**

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**VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık Cilt 2.3.1.3.3.1.1.1**

*İsmail YILMAZ*

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## **KÜTÜPHANE BİLGİLERİ**

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

*Dili: Türkçe + Matematik Mantık*





Türkiye Cumhuriyeti Devleti  
Kuruluşunun  
100.Yılı Anısına



*K. Atatürk*



## 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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- ✓ Makinaların insan gibi düşünebilmesini, karar verebilmesini ve davranabilmesini sağlayacak gerçek yapay zekayla ilişkilendirilmiştir.
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- ✓ Teorik kabullerle genetikle ilişkilendirilmiştir.
- ✓ Bilgi merkezli değerlendirme yöntemidir.



*Sanırım bilgi ve teknolojideki kaderimiz veriyle ilişkilendirilmiş.*



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GÜLDÜNYA



## Simge ve Kısaltmalar

$n$ : olay sayısı

$n$ : bağımlı olay sayısı

$m$ : bağımsız olay sayısı

$l$ : bağımsız durum sayısı

$I$ : simetrimin bağımsız durum sayısı

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

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

$lk$ : simetrimin bağımlı durumları arasındaki bağımsız durumların sayısı

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

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

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

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

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

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

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

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

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

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

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

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



durum arasında bağımsız durumun bulunduğunda 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

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

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

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

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

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

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



$f_Z S_{j,sa}$ : 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

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

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

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

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

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

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

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

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

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$f_Z S_{j_s,j,sa,D}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu



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

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

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

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

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

$f_zS_{j_{ik},j_i}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin her durumunun bulunabileceği olaylara göre simetrik olasılık

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

$fz,0S_{js,jik,j^{sa},D}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre simetrik olasılık

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$fzS_{js,jik,j^{sa},j_i}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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$fzS_{j_s, j_{ik}, j^{sa}, j_i, D}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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

simetrisinin son durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

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

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

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

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

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



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

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

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$f_Z S_{j_s,j^{sa},D}^{DSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu



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

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$f_{z,0}S_{j_s,j^{sa},D}^{DSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

$f_zS_{j_{ik},j^{sa}}^{DSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı toplam düzgün simetrik olasılık

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

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durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

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olaylara göre toplam düzgün simetrik olasılık

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$fzS_{j_i}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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

simetrinin son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$fzS_{j_i,D}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

${}_0S_{fz,j_i}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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$fzS_{j^{sa}}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin durumuna bağlı toplam düzgün olmayan simetrik olasılık

$fzS_{j^{sa},0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin durumuna bağlı toplam düzgün olmayan simetrik olasılık



$f_z S_{j_s, j_i, D}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı toplam düzgün olmayan simetrik olasılık

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$f_z S_{j_s, j_s^{sa}}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$f_z S_{j_s, j_s^{sa}, 0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$f_z S_{j_s, j_s^{sa}, D}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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



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

$f_{z,0}S_{j_s,j^{sa},0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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$f_{z,0}S_{j_{ik},j^{sa}}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı toplam düzgün olmayan simetrik olasılık

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bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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$f_{z,0}S_{j_s,j_{ik},j_i}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık



$fzS_{js,jik,ji,0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$fzS_{js,jik,ji,D}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son 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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$fzS_{js,jik,jsa,ji}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$fzS_{js,jik,jsa,ji,0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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$fz,0S_{js,jik,jsa,ji}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

$fz,0S_{js,jik,jsa,ji,0}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği



olaylara göre toplam düzgün olmayan simetrik olasılık

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

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

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

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

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

$fz S_{j_s,j_{ik},j^{sa},0}^{DOSD}$ : 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

$fz S_{j_s,j_{ik},j^{sa},D}^{DOSD}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı toplam düzgün olmayan simetrik olasılık

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

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

$fz S_{j_s,j_{ik},j_i}^{DOSD}$ : 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 toplam düzgün olmayan simetrik olasılık



$fz \overset{DOSD}{\Rightarrow}_{j_s, j_{ik}, j_i, 0}$ : 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 toplam düzgün olmayan simetrik olasılık

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$fz, 0 \overset{DOSD}{\Rightarrow}_{j_s, j_{ik}, j_i}$ : 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 toplam düzgün olmayan simetrik olasılık

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



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

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

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

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herhangi bir ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

$fzS_{\Rightarrow j_s,\Rightarrow j_{ik},j^{sa},j_i}^{DOSD}$ : 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 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 simetrinin 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 simetrinin 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 simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

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



# 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

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

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

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



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 tanımlanması eşitlikleri verilmektedir.

Farklı dizilimsiz dağılımlarda simetrinin durumlarının olasılık dağılımındaki sıralama 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 durumların bulunabileceği olaylara göre çıkarılan eşitlikler kullanılmaktadır. Bu eşitlikler, bir bağımlı ve bir bağımsız olasılıklı dağılımlar için VDO ve CHN eşitliklerinden 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 adların altına simetrinin bağımlı ve bağımsız durumlarına göre ve dağılımın bağımsız veya bağımlı durumla başlamasına göre “Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı/bağımsız-bağımlı/bağımlı-bir bağımsız/bağımlı-bağımsız/bağımsız-bağımsız/bağımsız-bağımsız” kelimeleri getirilerek, simetrinin bağımlı durumlarında 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 kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

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

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



## SİMETRİDEN SEÇİLEN İKİ DURUMA GÖRE TOPLAM DÜZGÜN OLMAYAN SİMETRİK OLASILIK

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara bağlı, düzgün olmayan simetrik durumların bulunduğu dağılımların simetrisi aynı olacak eşitlik; bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre simetrik olasılık eşitliğinden, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre düzgün simetrik olasılık eşitliğinin farkında elde edilebilir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre, toplam düzgün olmayan simetrik olasılıklar için,

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



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



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

eşitliği elde edilir. Bu eşitliğe bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık eşitliği denir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara bağlı; düzgün olmayan



simetrik durumların bulunduğu dağılımların sayısına **bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık** denir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık  $fzS_{j_s, j_{sa}}^{DOSD}$  ile gösterilecektir.

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

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

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$fzS_{j_s, j_{sa}}^{DOSD} = 0$$

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

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

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$



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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

$$\sum_{n_i=n+l_i-j_s+1}^n \sum_{n_{is}=n+l_i-j_s+1}^n$$

$$\sum_{n_{ik}=n+l_i-j_s+1}^n \sum_{n_{sa}=n+l_i-j_s+1}^n$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

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

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

$$D \geq n < n_{ik} > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa}$$

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

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



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



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



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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

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

$$\frac{(j_s - s - I)!}{(j_s - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

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

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

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

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + j_{sa}^{is} \geq \mathbf{l}_s \wedge \mathbf{l}_{ik} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = j_s - s = 0 \wedge$$

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq j_s - 1 = s \Rightarrow$$

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

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+j_{sa}-k}$$



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



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



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

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

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

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

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

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

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

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\}$$

$$s \geq 3 \wedge s = s \Rightarrow$$

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

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

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



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



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



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

$$\begin{aligned}
& ((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge \\
& j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee \\
& (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge \\
& j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\
& (D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge \\
& j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge
\end{aligned}$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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

$$\sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_{sa}+j_{sa}-k+1}^{\mathbf{l}_{sa}-k+1}$$

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

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

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

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

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

$$\frac{(\mathbf{l}_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} + j_{sa} - j^{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

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

$$\sum_{k=D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1}$$

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

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

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

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

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



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

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

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

$$\sum_{n_{ik}=n+1}^n \frac{(n_{ik}+j_s+1)!}{(n_{ik}-j_s+1)! \cdot (n_{ik}-j_{sa}+1)!} \cdot \frac{(n_i - n - l)! \cdot (n - s)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

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

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

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

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

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

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

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

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

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

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

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

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

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



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \Big) \Big) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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



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

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

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

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

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

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



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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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







$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

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

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

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

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

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

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



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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s_{ik}}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(l_s - n - s - l)!}{(n - n)! \cdot (n - s)!}$$

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

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

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

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

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

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

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

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

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

$$s \geq s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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



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

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

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

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

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

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{l_i+n-l_{sa}-k}^{(l_{sa}-k-j_{sa}-1)} \sum_{j_s+j_{sa}-1}^{(n+l_{sa}-j_{sa}-1)} \sum_{n_i=n+l_{sa}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{sa}-j_s+1}^{(n_{is}=n+l_{sa}-j_s+1)}$$

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot$$

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

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

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

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

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

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

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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

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



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

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

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



$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}.$$

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

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

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

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

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

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

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=0}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_s-1)} \sum_{j_{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

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



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

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

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

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

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

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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

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

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

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



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s}^{DQSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(j_s=\mathbf{l}_{sa}+1) \wedge (\mathbf{l}_s-k-j_{sa}^{ik}+1)} \sum_{j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D} \\ & \sum_{n_i=\mathbf{l}_{ik}}^{\mathbf{n}} \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{\mathbf{l}_{sa}-k+1} \end{aligned}$$



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

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

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

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



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_{\mathbf{z}, j_{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{j_s=\mathbf{l}_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1}^{\mathbf{n}-j_s+1} \sum_{j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{-k+1} \sum_{n_i=\mathbf{l}_i-j_s+1}^{n_i-j_s+1} \sum_{n_{is}=\mathbf{n}-j_s+1}^{n_{is}+j_s-j_{sa}} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{\mathbf{l}_{sa}-k+1}$$



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

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

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

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



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(j_{sa}-j_{sa}+1)} \sum_{j_{sa}^{ik}=\mathbf{l}_s+\mathbf{l}_{sa}-k}^{\mathbf{l}_s+\mathbf{l}_{sa}-k} \frac{(n_i - j_s + 1)}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j_{sa} - \mathbf{l}_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j_{sa}^{ik}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \frac{(n_i - j_s + 1)}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} + j_s - j_{sa})}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \end{aligned}$$



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

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

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

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

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

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

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

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

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

$$l_s \leq j_s \leq j_{sa} - j_{sa} + 1$$

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

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

$$s \geq n - l_i \wedge I = \mathbb{K} = 0 \wedge$$

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$



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



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

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

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

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

$$\frac{(l_s - s - l)!}{(l_s - n - l)! \cdot (n - s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D}^{l_s+j_{sa}-k} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(j^{sa} + \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_i+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \end{aligned}$$



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

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

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

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

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

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

$$\frac{(n_i - n - l)! \cdot (n - s)!}{(n_i - n - l)! \cdot (n - s)!}.$$

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

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

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

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

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

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

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

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

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

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

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

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



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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D-s+1)}^{(\mathbf{l}_i+\mathbf{n}-D-s)} \sum_{(j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-s)}^{(\mathbf{l}_i+j_{sa}-k-s+1)} \\ & \sum_{n_i=\mathbf{n}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_{is}+j_s-j^{sa})} \sum_{j^{sa}+1}^{j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{j}_s+j_{sa}-1}^{\mathbf{l}_i+j_{sa}-k-s+1} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \end{aligned}$$



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

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

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

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

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

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

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

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

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

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

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

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

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

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

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



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, j_{sa}^i\} \wedge$$

$$s > j_{sa} = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=\mathbf{l}_{sa}+n-D}^{\mathbf{l}_s+j_{sa}-k} \\ \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



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



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

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_{Z^{\mathbf{s}}}^{QSD} = \sum_{k=1}^{D-\mathbf{n}-(\mathbf{l}_{sa}+\mathbf{n}-D)} \sum_{l_s=\mathbf{l}_s+\mathbf{n}-D}^{(\mathbf{l}_{sa}+\mathbf{n}-D)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1} \sum_{n_i=\mathbf{n}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$



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

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



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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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



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

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

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

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

$$\sum_{k=0}^{l-1} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{l_{sa}-j_s+l+1}$$

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

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

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

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

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

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

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$



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

$$\sum_{k=1}^n \sum_{l=1}^{(j_s=1)} \sum_{j^{sa}=j_s}^{(j_s=1)} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot \frac{(D + s - \mathbf{n} - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

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

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

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq s, \mathbf{s} = s \Rightarrow$$

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

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

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

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



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



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

$$\sum_{k=1}^{i\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{\mathbf{l}_{sa}-i\mathbf{l}+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_s=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - \mathbf{n}_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - \mathbf{n} - \mathbf{l}_{sa} + 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(j^{sa} - \mathbf{l}_s - 1)!}{(j^{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

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

$$\sum_{k=1}^{i\mathbf{l}-1} \sum_{(j_s=2)}^{(j^{sa}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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

$$\sum_{k=1}^{i\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

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

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

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

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

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

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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

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

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

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

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

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



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



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



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

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

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

$$\sum_{n_{ik}=n+l_s-j_{sa}^{ik}+1}^{( )} \sum_{n_{sa}=n+l_s-j_{sa}^{ik}-j_{sa}-k}^{( )} \frac{(n_i - l_s - k)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

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

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

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

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

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

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

$$n + j_{sa} - 1 < l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$$

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

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

$$j_{sa} \in \{j_{sa}^s, j_{sa}^{s-1}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

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



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



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



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

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

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



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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < \mathbf{l}_{ik} \leq D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} & f_z S_{j_s, j^{sa}}^{DOS} \left( \sum_{k=1}^{D+l_s-j_{sa}-\mathbf{l}_{sa}} \right) \\ & \sum_{j_s=j_{sa}-j_{sa}+\mathbf{l}_{sa}-k}^{j_s=j_{sa}-j_{sa}+\mathbf{l}_{sa}-k} \sum_{j_{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+\mathbf{l}_{sa}-k} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\ & \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+j_{sa}-k} \right. \\ & \left. \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \right) \end{aligned}$$



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



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



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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l) \cdot (n - s)!} \cdot$$

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

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

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

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

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

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

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_{sa} + j_{sa}^{ik} - n - 1 \wedge$$

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

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

$$s \in \{j_{sa}^s, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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



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



$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

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

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

$$((D - \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$



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

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

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

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

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

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

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

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

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

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

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

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

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

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

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

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

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

$$s \geq 3 \wedge s = s =$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_s + j_{sa} - k} \sum_{j^{sa}=j_{sa}+1}^{n_{is} + j_s - j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$



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

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(\mathbf{l}_s-k)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-\mathbf{n}}^{\mathbf{l}_{sa}-i^{l+1}}$$

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

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

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

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

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

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

$$\sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)}^{\mathbf{l}_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

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



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

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

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

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

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

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

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

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

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

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



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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^i, j_{sa}^s, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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



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



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

$$\sum_{k=0}^{\sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!} \cdot$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$l_{sa} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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



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

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

$$l_{sa} \leq D + j_{sa} - n) \vee$$

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

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

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

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

$$z S_{j_s, j}^{D, n, s} = \left( \sum_{i=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \right. \\ \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \right)$$



$$\begin{aligned}
& \sum_{k=1}^i \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa})}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa} - s)! \cdot (\mathbf{n} - s)!} + \\
& \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(n_i-j_s+1)} \sum_{j^{sa}=j_{sa}+2}^{n_{is}+j_s-j^{sa}} \right) \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_{sa}-k+1}
\end{aligned}$$



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



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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!}.$$

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

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

$$\sum_{k=l}^{\mathbf{n}} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

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

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (n - s)!}.$$

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

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(\mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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



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

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

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

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

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

$$l_{sa} \leq D + j_{sa} - n) \vee$$

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

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

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

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \right).$$



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

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

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_s=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

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

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

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

$$\left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right)$$

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

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

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

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

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

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

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



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



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee$$

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

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

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

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

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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



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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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



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

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

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

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

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

$$\sum_{k=0}^{l_{sa}-l+1} \sum_{i=l-k}^{n-l-k} \sum_{j_{sa}=n-D}^{n-l-k-i}$$

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

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

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

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

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

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

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

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



$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}.$$

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

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

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1)$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D > \mathbf{n} \leq n \wedge l_s = D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

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



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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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



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



$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}.$$

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

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

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - (\mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa}^{ik} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - (\mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - (\mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

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

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - (\mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$



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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

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

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

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

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

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

$$s: \{j_{sa}^i, j_{sa}^s, \dots, j_{sa}\}^{s-1}$$

$$s \geq 3 \wedge s = \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\ \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



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



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

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

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

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

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

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

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

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

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

$$((D - l_i) < n \wedge l_s = D - n + 1 \wedge$$

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

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

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

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

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



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

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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

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

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

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

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

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

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

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

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

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

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

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

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

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

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

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

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



$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

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



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

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

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot$$

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

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

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

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

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

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

$$s \in \{j_{sa}^s, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

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

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

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



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

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

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

$$\sum_{k=1}^{i^l} \sum_{(j_s=1, \dots, j_{sa}=j_{sa})}^{(\quad)} \sum_{n_i=1}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1, \dots, n_{sa}=n)}^{(\quad)}$$

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

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

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



$$\sum_{k=1}^n \sum_{l=1}^{(n)} \sum_{j_s=1}^{j^{sa}} j^{sa} = j_{sa}$$

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

$$\frac{(n_i - s - l_k)!}{(n_i - n - l_k)! \cdot (n - s)!}$$

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

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

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

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

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

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

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

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

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

$$s \geq 3 \bullet s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

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

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

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

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



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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

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

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

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

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



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

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

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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

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



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

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

$$\sum_{k=1}^{i^{l-1}(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-j_s+1)}$$

$$\sum_{n_i=\mathbf{n}+1}^n \sum_{n_i=\mathbf{n}+1}^{n+j_s+1}$$

$$\sum_{n_{ik}=\mathbf{n}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbf{l}_k)}^{(n_{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbf{l}_k)} \frac{(n_i - s - \mathbf{l}_k)!}{(n_i - \mathbf{n} - \mathbf{l})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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

$$\sum_{k=1}^i \sum_{(j_s=1)}^{(n)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbf{l}_k}^n \sum_{(n_{ik}=\mathbf{n}_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbf{l}_k)} \sum_{n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbf{l}_k}$$

$$\frac{(n_i - s - \mathbf{l}_k)!}{(n_i - \mathbf{n} - \mathbf{l}_k)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

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

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$



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

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

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

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

$$s \geq 3 \wedge s = s \Rightarrow$$

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



$$\begin{aligned}
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(\cdot)} \\
& \frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-l)! \cdot (n-s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa})! \cdot (j_{sa}-j^{sa}-s)!} - \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}^{(\cdot)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \\
& \frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (n-s)!} \cdot \\
& \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s + j_{sa} - j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - \mathbb{k} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_i + n + j_{sa} - D + s}^{n} \sum_{(n_{is}=n-j_s+1)}^{(n_i - j_s + 1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{is} + j_s - j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=2)}^{l_i + j_{sa} - k - s + 1} \sum_{j^{sa}=l_{ik} + j_{sa} - k - j_{sa}^{ik} + 2}^{n} \sum_{(n_{is}=n-j_s+1)}^{(n_i - j_s + 1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{is} + j_s - j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{j_s=1}^{(n_i - j_s + 1)} \frac{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1}{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_{sa} - \mathbf{n} - l_{sa}} \sum_{j_s = j^{sa} - j_{sa} + 1}^{(n_i - j_s + 1)} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(n_i - j_s + 1)} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$\begin{aligned} S_{i_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{j^{sa}-j_{sa}^{ik}+1} \sum_{l=2}^{j^{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\ & \sum_{n_i=n}^{n-(n_i-j_s+1)} \sum_{n_{is}=n-j_s+1}^{n_i-j_s+1} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} + j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - k + 1)!}{(l_{sa} - l_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - l_s - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^l \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-l+1} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(s-1)!}{(n-l)! \cdot (s)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D+l_s-1)!}{(D+j_{sa}+s-n+l_{sa}-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1$$

$$D \geq n < n \wedge n = \mathbb{k} = 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa} - 1$$

$$s: \{j_{sa}^s, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_s$$

$$\begin{aligned}
fz S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s + \mathbf{n} - D - j^{sa} - k + 1)}^{(l_{ik} - k - j_{sa}^{sa} - 1)} \sum_{(j_s + j_{sa} - 1)}^{(l_i + j_{sa} - k - s + 1)} \cdot \\
& \sum_{n_i = \mathbf{n}}^n \sum_{(n_{is} = \mathbf{n} - j_s + 1)}^{(n - j_s + 1)} \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_{is} + j_s - j^{sa})} \cdot \\
& \frac{(n_i - n_{is} - 1)!}{(i - l - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^l \sum_{(j_s=1)}^{( )} \sum_{(j^{sa}=l_i + \mathbf{n} + j_{sa} - D - s)}^{(l_i + j_{sa} - l^{l-s+1})} \cdot \\
& \sum_{n_i = \mathbf{n}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} + 1)} \cdot
\end{aligned}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \frac{(l_{ik}-k-j_{sa}^{ik})!}{(j_s=l_i+n-j_{sa}^{ik}+1) j^{sa}=j_s+j_{sa}^{ik}}$$

$$\sum_{i_k=n+l_s-j_{sa}^{ik}}^n \frac{(n_i-j_s+1)!}{(n_i=n+l_s-j_{sa}^{ik}+1) (n_{is}-j_s+1)}$$

$$\sum_{i_k=n+l_s-j_{sa}^{ik}}^n \frac{(n_{is}-j_s+1)!}{(n_{is}=n+l_s-j_{sa}^{ik}+1) (n_{is}-j_s+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_{\mathbf{Z}} S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=j_{sa}}^{(\mathbf{l}_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{n_i=n}^{(n_i-j_s+1)} \sum_{n_{is}=n-j_s+1}^{(n_{is}+j_s-j^{sa})} \sum_{j^{sa}=1}^{j^{sa}+1} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_i - n_{sa} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{\mathbf{l}_{sa}-k+1} \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \end{aligned}$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=j^{sa}-j_{sa}+1}^{( )} \sum_{j^{sa}=j_{sa}}^{l_{sa}-i^{l-1}}$$

$$\sum_{n_i=n}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$



$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - l_i)!}$$

$$\sum_{k=0}^n \sum_{i=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j_{sa}=j_{sa}}^{( )} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) n_{ik} n_{ik+j_{sa}-j_{sa}-\mathbb{k}} \frac{(s-\mathbb{k})!}{(s-\mathbf{n}-\mathbb{k})! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-s)!}$$

$$\begin{aligned} & ((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & l_i \leq D + s - \mathbf{n} \vee \\ & (D < \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} < n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\ & l_i \leq D + s - \mathbf{n})) \wedge \\ & D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge \\ & j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge \\ & \mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge \\ & s \geq 3 \wedge \mathbf{s} = s \Rightarrow \end{aligned}$$



$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i_l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - i_s - k + 1)!}{(l_s + i_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i_l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i_l+1} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-l)! \cdot (n-s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa})! \cdot (j_{sa}-j^{sa}-s)!} -$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (n-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_{sa} + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \bigg) \bigg) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{i=1}^{l-1} \sum_{j_s=2}^{(l_{sa}-D-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}} \sum_{n=n}^{(n_i-j_s)} \sum_{n_{is}=n-j_s+1}^{(n_i-j_s)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_s)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{l-1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{l_s} \sum_{l_t=1}^{(j_s-k)} \sum_{j^{sa}=l_{sa}+n-D}^{l+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s =$$

$$S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_s + j_{sa} - k} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s-k+1}^{l_{ik}+j_s-k-j_{sa}^{ik}+1} \frac{(l_{ik}+j_s-k-j_{sa}^{ik}+1)!}{(j_s - k - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{j^{sa}} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=1)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \frac{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)!}{(j_s - k - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j_s+1)} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+l_s-j_s+1}^n \frac{(n_i-j_s+1)!}{(n_i-l_s+1)! \cdot (j_s-1)!}$$

$$\sum_{n_{ik}=j_s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n+l_s-j_{sa}^{ik}-j_{sa}-l_{ik})}^{( )} \frac{(n_i-j_s+1)!}{(n_i-l_s+1)! \cdot (j_s-1)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_{ik} + j_{sa}^{ik} < l_{ik} \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, j_{sa}^l, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=2)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(D-j_{sa}^{ik}+1)}^{(l_s-j_{sa}^{ik})} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=1}^n \sum_{l=1}^{(j_s=1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j_{sa})}^{(n_i-j_{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{(j_s=1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$



$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-k} &= \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i+j_s-j^{sa})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(l_s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-i^{l-s}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_{ik}+j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s-k}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i - n)!}{(n_i - n)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - n)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& D + j_{sa} - n < l_s \leq D + l_i + j_{sa} - n - j_{sa}^{ik}) \vee \\
& (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee \\
& (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge
\end{aligned}$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j_{sa} - j_s + 1)} \sum_{(j_s=2)}^{l_s - j_{sa} - k} \sum_{j_{sa}=l_{sa}}^D \frac{(n_i - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} + j_s - j_{sa})!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa}=l_s + j_{sa} - k + 1}^n \frac{(n_i - j_s + 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} + j_s - j_{sa})!}{(n_{sa} - j_{sa} + 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l_s}^{l_{sa}-l+1} \sum_{i=l_s}^{l_{sa}-l+1} \sum_{n_i=\mathbf{n}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_i-j_s+1}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$



$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}.$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l-1} \sum_{(j_s+\mathbf{n}-D-s+1)}^{j_s-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=1}^{\infty} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l_i^{s-1}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa})}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=1)}^{l_{sa}-l_s+1} \sum_{j^{sa}=l_{sa}+n-l_s}^{l_{sa}-l_s+1}$$

$$\sum_{n_i=n}^n \frac{(n_i - j_{sa} + 1)!}{(j^{sa} - 2)! \cdot (n_i - j_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - j_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} + 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik})) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$



$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = 0$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}-l_k}^{n_{is}+j_s-j^{sa}-l_k} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
& \quad \left. \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \right. \\
& \quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \left. \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \right)
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - \mathbf{n} + 1)!} \cdot \\
& \frac{(n_{is} - \mathbf{n} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + \mathbf{n} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - \mathbf{n} - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(j_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{n} - j_{sa} + 1)!}{(\mathbf{n} + \mathbf{l}_{sa} - j_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{\mathbf{n}_{sa}+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - \mathbf{l})!}{(n_i - \mathbf{n} - \mathbf{l})! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_{sa}^{DOSD} = & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \\ & \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j^{sa}+1}^{n_{is}+j_s-j^s} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(D + l_s + j_{sa} - n - l_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_s^{sa} - DOSD &= \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \\ &\sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}-l_k}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_{sa}^{DO} j_{sa}^{SD} &= \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \\ &\sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_s}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_s - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}}^{n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}^{\mathbb{K}}, j_{sa}^{\mathbb{K}}, \dots, j_{sa}^i\},$$

$$s \geq 3 \wedge \mathbf{s} = s + 1 \wedge$$

$$\mathbb{K}_z: \mathbb{Z} \geq 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-k} \right. \\ \left. \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \right. \\ \left. \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \right).$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_s+j_{sa}-k}^{j^{sa}+j_{sa}-k} \right) \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{j_s=\mathbf{n}-D}^{(l_s-1)} \sum_{j^{sa}=l_{sa}+1}^{l_{sa}+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} j^{sa+1} \cdot \\
& \frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq n < n \wedge l_s = \mathbb{k} > s \wedge$$

$$j_{sa}^{lk} = j_{sa}^{lk} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq s \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$



$$\begin{aligned}
& \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \right. \\
& \left. \sum_{k=1}^{(D + j_{sa} - n - l_{sa})} \sum_{(j_s=l_s+n-D)}^{(l_s-n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left. \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \right. \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \right)
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j^{sa} + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D}^{D-n+1} \sum_{(j_s=l_{sa}+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s-1}}^{\binom{n_i-j_s+1}{j_s-j_{sa}+1}} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{\binom{n_i-j_s+1}{j_s-j_{sa}+1}}$$

$$\frac{(j_s - s - I)!}{(j_s - \mathbf{n} - s)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(l_s - \mathbf{k})!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{ik} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_i \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I - \mathbf{k} \geq 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^s = j_s - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}^{s-1}, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{n} - \mathbf{l}_i = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{\binom{\cdot}{\cdot}} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j_s - j^{sa} + 1)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=1}^{(j_s-1-j_{sa})} \sum_{l_i=1}^{(l_i-1-j_{sa}-D-s)} \sum_{n_i=n+1}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge n > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - j^{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j^{ik}}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}+1)!}{(j^{sa}-j_s+1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa})!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\
 & \frac{(\mathbf{l}_s-k-1)!}{(\mathbf{l}_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D+j_s-\mathbf{l}_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} \cdot \\
 & \sum_{k=1}^{D+\mathbf{l}_s+\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
 & \frac{(n_i-s-l)!}{(n_i-\mathbf{n}-l)! \cdot (\mathbf{n}-s)!} \cdot \\
 & \frac{(\mathbf{l}_s-k-1)!}{(\mathbf{l}_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D-\mathbf{l}_i)!}{(D+j^{sa}+s-\mathbf{n}-\mathbf{l}_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}
 \end{aligned}$$



$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$f_z S_{i, j_{sa}}^{DOS} = \sum_{k=1}^{D-n+1} \sum_{l_i=j_{sa}-j_s+1}^{j_{sa}-k} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{j_{sa}-k} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-k} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{\mathbf{s}, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s-1}}^{(n_{is}+j_{sa}^{s-1}-k)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{is}+j_{sa}^{s-1}-k)}$$

$$\frac{(n - n^{sa} - s - l)!}{(n - n^{sa} - s - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - n^{sa} - k)!}{(l_s - n^{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l_s \geq 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^s = j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^{s-1}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$







$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_{is}+j_s-j^{sa})} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{is}+j_s-j^{sa})} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - 1)!} \cdot \\
 &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(D + j_s - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
 &\sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_{is}+j_s-j^{sa})} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{is}+j_s-j^{sa})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{is}+j_s-j^{sa})} \\
 &\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
 &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{(l_i+l_{js}-k-j_{sa}-D-s)}^{(l_i+j_{sa}-k-j_{sa}^{ik}+1)} \frac{(n_i - n_{is} - 1)!}{(i - l_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_i+j_{sa}-k-s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{j_{sa}=l_i+j_{sa}-k-s+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i-j_s-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}-l_s-j_{sa}+1)!}{(j_{sa}-l_{sa}-j_{sa}-l_s)! \cdot (j_{sa}-j_s-j_{sa}+1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s++1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa})!} \cdot$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \frac{(l_{ik}-k-j_{sa}+1)!}{(j_s+l_i+n-l_{ik}-j_{sa}+1)! \cdot (j^{sa}-j_s-j_{sa}+1)!} \cdot$$

$$\sum_{n_i=n+l_k}^n \frac{(n_i-j_s+1)!}{(n_i-n+l_k-j_s+1)!} \cdot \sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{n_{ik}=n_{is}+j_{sa}^{ik}} \frac{\binom{n_{ik}-j_{sa}^{ik}}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}}{\binom{n_{ik}-j_{sa}^{ik}}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}} \cdot$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \bigg) \wedge$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik})}^{(j^{sa}-j_{sa}+1)} \sum_{(j^{sa}=l_{sa}+\mathbf{n}-D)}^{(l_{ik}+j_s-k-j_{sa}^{ik}+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{sa}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$j_s + j_{sq} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sq} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{sa}+\mathbf{n}-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{j^{sa}+1} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - i_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \end{aligned}$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{l_i=n-l_s-k-j_{sa}+1}^{(l_{ik}-k-j_{sa}+1)} \sum_{j_{sa}=1}^{n-l_i+l_s-k-j_{sa}+1} \frac{(n_i - j_s + 1)!}{(n_i - n + \mathbb{k} - j_s + 1)!} \cdot$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq n < n \wedge l_i \geq D - l_s + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+1}^n \frac{(n_i - j_s + 1)!}{(n_i - n + 1)! \cdot (j_s + 1)!}$$

$$\sum_{n_{ik}=n+1}^{( )} \sum_{(n_{sa}=n+1)}^{( )} \frac{(n_i - j_s + 1)!}{(n_i - n + 1)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s \cdot j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s \leq s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{\mathbf{n}+1} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(l_s-1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-k+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})} \frac{(n_{is}-j_s+1)!}{(n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_{sa}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=l_i+n+j_{sa}-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n}^n \frac{(n_i+j_s+1)!}{(n_i+j_s+1)!}$$

$$\sum_{n_{ik}=1}^{(\cdot)} \frac{(n_{sa}=n_i+j_{sa}^{ik}-j_{sa}-k)!}{(n_i)!} \cdot \frac{(n-l)! \cdot (n-s)!}{(n-l)! \cdot (n-s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \bigg) \wedge$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z \mathcal{S}_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D-s+1)}^{(l_i+\mathbf{n}-D-s)} \sum_{j_{sa}=l_i+j_s-k-s+1}^{l_i+j_s-k-s+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-l_{sa}-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-l_{sa}-j_s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_{is}+j_s-1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s-1)}^{(n_{ik}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-1}^{(n_{ik}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(n_{sa}-n_{ik}+j_{sa}-j_{sa}-l_k)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbf{n} \geq 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3, \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{i=l_s+1}^{(l_s-k+1)} \sum_{j_{sa}=l_{sa}-k+1}^{(l_{sa}-k+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{n+1} \sum_{l_s=l_s+n-D-j_{sa}}^{(l_{sa}-D-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(j_s-1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_s + 1)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!}$$

$$\frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_s - j_{sa} - 1)!}{(l_s + l_{sa} - j^{sa} - l_s)! \cdot (j_s - j_{sa} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=0}^{l_s+l_s+s-\mathbf{n}-l_i} \sum_{(i=\mathbf{n}-D-s+1)}^{-(k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-j_{sa}^{ik}+1)}^{(j_s=j_{sa}-j_{sa}^{ik}+1)} \frac{l_{ik}+j_{sa}-j_{sa}^{ik}+1}{j_{sa}^{ik}+1} \right. \\ \sum_{i=n+k}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{sa}=n-j_{sa}+1)} \sum_{j_{sa}^{sa}+1}^{(n_{is}+j_s-j_{sa}-k)} \\ \frac{(n_i-n_{is}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\ \frac{(n_i-n_{sa}-1)!}{(j_{sa}-i-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \right. \\ \sum_{k=1}^{(j_s-1)} \sum_{(j_s=1)}^{(j_s=1)} \sum_{j_{sa}=j_{sa}}^{(j_s=1)} \\ \sum_{n_i=n+k}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-j_{sa}-k+1)} \\ \frac{(n_i-n_{sa}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}+1)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(D + \mathbf{l}_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l-1} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s - 1)!}{(n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=1}^{i^l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_i} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k} - j_s - s)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa} - 1,$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbf{s} = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(n_{sa}-j_s+1)} \sum_{j_{sa}=j_s}^{(n_{sa}-j_s+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-n_{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n - s)!} + \\
& \left( \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right) \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l-1} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{\mathbf{l}_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_s=\mathbf{n}+j_{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})} \\
& \frac{(n_i - \mathbf{n}_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - \mathbf{n} - \mathbf{l}_{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(j^{sa} - \mathbf{l}_{sa} - i^{l-1} - 1)!}{(j^{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(n_i-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} l_{ik}+j_{sa}-k-j_{sa}^{ik}+1 \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n-l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n-l_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n-l_{sa}-k} \\
& \frac{(n_i - n_{sa} - 1)!}{(j_s - 1)! \cdot (n_i - n_{sa} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{( )} \sum_{(j_s=1)}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-l_k+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$







$$\begin{aligned}
fz S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right. \\
& \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
& \left. \frac{(D+l_s+j_{sa}-n-l_{sa}-s)!}{(D+l_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\
& \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
& \left. \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \right)
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{j_s=l_i+n-D-s+1}^{n-l_i+l_s+1} \sum_{j_{sa}=j_s+j_{sa}-1}^{n-l_i+l_s+1} \\
& \frac{(n_i - j_{sa} - 2)!}{(n_i - n_{sa} - j_{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{n-l_i+l_s+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_j^{l_{sa}} S_{sa}^D &= \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right. \\ &\quad \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ &\quad \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{K}}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\quad \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_{is} - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(j_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{l_s+j_{sa}-k}^{l_s+j_{sa}-k} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(D+l_s+s-n-l_i-j_{sa})!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+l_{sa}-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+l_s)!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+l_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1$$

$$D \geq n < n, \mathbb{k} = \mathbb{k} \geq 1$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{sa} < j_{sa} - 1$$

$$s: \{j_{sa}^s, j_{sa}^{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = 1, \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$

$$\sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{j_s=\mathbf{n}-j^{sa}+1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1} \sum_{j_s=\mathbf{n}-j^{sa}+1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=2}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^{\binom{D}{l}} \sum_{(j_s=1)}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_s=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i - \mathbf{n}_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - \mathbf{n} - \mathbf{l}_s + 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - \mathbf{l}_s - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(j^{sa} - \mathbf{l}_s - 1)!}{(j^{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\left( \frac{(D + j_{sa} - \mathbf{l}_{sa})!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+\mathbf{l}_{sa}-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{j^{sa}-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{\binom{D}{l}}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^1, j_{sa}^2, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = 1 + \mathbb{K} \wedge$$

$$\Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)} l_s + j_{sa} - k \sum_{j^{sa}=j_{sa}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_s=2)}^{i l_s - l_s - k + 1} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \frac{(l_{sa} - i)^{l+1}}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{sa}=n-j^{sa})}^{(n_i-j^{sa}-\mathbb{K}+1)} \frac{(n_i - n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n_i - j^{sa})!} \cdot \\
& \frac{(l_{sa} - i - j_{sa} + 1)!}{(l_{sa} - i - j_{sa} + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j^{sa} - n - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_{sa}-1} \sum_{j_{sa}=j^{sa}-j_{sa}+1}^{l_{sa}-1} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}+j_{sa}-k} \frac{(n_i - j_s + 1)}{n_i=n+\mathbb{K}} \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \cdot \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{(n_i - s - l)!} \cdot \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=0}^{\infty} \sum_{i=0}^{\infty} \sum_{j=0}^{\infty} \frac{(l_{sa} - i)^{l+1}}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - \mathbf{n})!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa}=j_s + j_{sa} - 1}^{l_{sa} - k + 1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{is}+j_s-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i - j_s + 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j^{sa} - l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa} - i^{l+1}} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-j_s+1)} \sum_{n_i=\mathbf{n}+1}^{(n-j_s+1)} \sum_{n_{ik}=\mathbf{n}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - \mathbb{k})!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - s)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}^{(n-j_s+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_{sa}=\mathbf{n}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^1, j_{sa}^2, \dots, j_{sa}^i\},$$

$$s \geq 3 \wedge s = 1 + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - s)!} + \\
& \sum_{j_s=2}^{( )} \sum_{j^{sa}=j_{sa}}^{( )} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left( \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s-j_s-k+1}^{l_s-k+1} \frac{(n - j_s + 1)!}{(j_s - 1)! \cdot (n_i - n_{is} + 1)!} \cdot \\
& \sum_{n_i=n-k}^n \sum_{(n_{is}=n+k-j_s)}^{(n-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n-j^{sa}+1)} \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \sum_{n_i=n+k}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-k+1)} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$n_i = n + \lfloor \frac{i-1}{s} \rfloor$$

$$n_{ik} = \sum_{j=1}^n j s_{a-ik} (n_{sa} = n_{sa-ik} - j s_{a-ik})$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D + j^{sa} + s - n - l_i - j_{sa})!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{\infty} \sum_{l=1}^{\infty} \sum_{j=1}^{\infty} j^{sa} = j_{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\left(\begin{smallmatrix} \phantom{0} \\ \phantom{0} \end{smallmatrix}\right)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^1, j_{sa}^2, \dots, j_{sa}^i\},$$

$$s \geq 3 \wedge s = n + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - s)!} + \\
& \sum_{k=1}^{(j_s)} \sum_{j_s=2}^{(j_s)} \sum_{j^{sa}=j_{sa}}^{(j_s)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(l_{sa}-i^{l+1})} \sum_{j^{sa}=j_s+1}^{j_{sa}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s - 1)!}{(n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(l_{sa}-i^{l+1})} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=\mathbf{l}_i}^{(\quad)} \sum_{j_s=1}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} n_{sa=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbf{l}_i)!}{(n_i - \mathbf{n} - \mathbf{l}_i - s)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - \mathbf{l}_i)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa}$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{ik} \leq D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$



$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 PQSD = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=2}^{l_s+j_{sa}-k} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{j_s-1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \right. \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \right)
 \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=1}^{D+l_s+j_{sa}-\mathbf{n}-l_s} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{l_s+j_{sa}-k}^{l_s+j_{sa}-k} j^{sa}=l_i+n+j_{sa}-D-s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(D+l_s+s-n-l_i-j_{sa})!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+l_{sa}-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+l_s)!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+l_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$



$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{D+l_s-n-l_{sa}} S_{j_s, j_{sa}}^{DOS} \\ & \sum_{j_s=j_{sa}+n-D-j_{sa}+1}^{(l_s-j_s+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n-j_s+1)} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+\mathbf{n}-D-j_{sa})} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(n_{sa}-j_{sa}+1)} \\
& \frac{(n-l_s+1)!}{(n-l_s+1)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+l_s+s-n-l_i-j_{sa})! (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{sa} \leq D + l_{ik} + j_{sa}^{ik} - n - j_{sa}^{ik} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+\mathbf{n}-D-j_{sa})} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D-j_s-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{i=1}^{(n)} \sum_{j^{sa}=l_i+n-D}^{n-l_{sa}-i+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j_s+1}^{(n_i-j_s+1)}$$

$$\frac{(n_i - j_s - 1)!}{(n_{sa} - j_s - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_s - n - l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_{z=1}^{POSD} = & \sum_{k=1}^{l_s} \sum_{j_s=j^{sa}-j_{sa}+1}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-k+1)}^{(n_i-j^{sa}-k+1)} \sum_{j_{sa}=j_{sa}+1}^{(n_i-j^{sa}-k+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j^{sa}-j_{sa}}^{(n_i-j_s+1)} \sum_{j_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k}}^{(n_i-j_s+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^l \sum_{(j_s=1)}^{(n_i-j_s+1)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$



$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=0}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=0}^l \sum_{(j_s=1)}^{(j_s=1)} \sum_{j_{sa}=j_{sa}}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{(n_i-j^{sa}-\mathbb{k}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{sa} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
 & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} - \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}
 \end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - l_s + 1)! \cdot (l_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n - l_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^s \sum_{l} \sum_{(j_s=1)}^{j_s} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}+j_{sa}-j_{sa}-\mathbb{k}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$(D \geq \mathbf{n} < n \wedge l_i \leq D - \mathbf{n} - 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - j_s + 1 = l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} - l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$l_{sa} - l_i \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$



$$\mathbb{k}_Z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}^{(\quad)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
 & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} - \\
 & \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1}
 \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-1)}^{(\quad)} \\
& \frac{(n_i-s-l)!}{(n_i-\mathbf{n}-l) \cdot (n-s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-j_s-l+1)! \cdot (l-2)!} \cdot \\
& \frac{(D-l_i)}{(D+j^{sa}+s-\mathbf{n}-l-j_{sa})! \cdot (n-j_{sa}-j^{sa}-1)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} - l_i + j_{sa} - j_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l - l_i \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^s - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3, \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
\end{aligned}$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - l_{sa} - s)!} \cdot$$

$$\sum_{i=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=1}^{( )} \frac{(n_{is} - j_s - j^{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - j_s - j^{sa} - 1)!} \cdot$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i - j^{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - j^{sa} - 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1} (l_{sa} - k - j_{sa} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{( )} \frac{(n_i - j_s + 1)!}{(n_i - j_s + 1)! \cdot (n_i - j_s + 1)!} \cdot$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i - j_s + 1)!}{(n_i - j_s + 1)! \cdot (n_i - j_s + 1)!} \cdot$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_i} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - 1)!}{(n_i - n - 1)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{ik} - j_{sa} - s > 0 \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}, j_{sa}\} \cap \{j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - l_{sa} - s)!} \cdot$$

$$\sum_{i=1}^{( )} \sum_{j_s=1}^{( )} \frac{(n_{is} - j_s - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i - j^{sa} - \mathbb{k} + 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{l_i} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - 1)!}{(n_i - n - 1)! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - 1 \geq l_{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{i-1} = j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \mathbb{k} \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \frac{(l_{ik} - k - j_{sa}^{ik} + 2)!}{(l_{ik} - k - j_{sa}^{ik} + 2)! \cdot (j_s - j_{sa}^{ik} - j_{sa}^{ik} + 2)!} \cdot \sum_{n_i = \mathbf{n} + \mathbb{k}}^{l_i + j_{sa} - k - s + 1} \frac{(n_i - j_s - j_{sa}^{ik} + 1)!}{(n_i - j_s - j_{sa}^{ik} + 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_i - n_{is} - 1)!}{(n_i - j_s - j_{sa}^{ik} + 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{j_s=1}^{l_i + j_{sa} - k - s + 1} \sum_{j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s}^{l_i + j_{sa} - k - s + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{k} + 1)}
\end{aligned}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - l_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-l_{sa}-1)}^{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-l_{sa}-1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(n_i=n+1, \dots, n_i=n+1)}^{(n_i=n+1, \dots, n_i=n+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D + n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_{ik} + j_{sa}^{ik} < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_{sa} + \mathbf{n} - D}^{n_{is} + j_s - j^{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j^{sa}=l_{ik} + j_{sa} - k - j_{sa}^{ik} + 2}^{n_{is} + j_s - j^{sa} - \mathbb{k}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{i=1}^{n-l+1} \sum_{j^{sa}=l_{sa}+n-D}^{n-l+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j_s+1}^{(n_i-j_s+1)}$$

$$\frac{(n_i - j_s - 1)!}{(n_i - n_{sa} - j_s + 1)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j}^{D, \mathbf{n}} &= \sum_{k=1}^{l-1} \frac{(l_i - D - s)!}{(k-2)!} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_i+j_{sa}-i^{l-s+1}} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(j_s-s-1)!}{(j_s-n-l)! \cdot (j_s-s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-s-1)!}{(D+j^{sa}+s-n-l_{sa}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} l_{sa-k+1} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^{l_i} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{K})}$$

$$\frac{(n_i - \mathbf{n}_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - \mathbf{n} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - \mathbf{l}_s - j^{sa} - 1)!}{(l_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j_s - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{K})}^{(j_s=j_{sa})}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{l_i} \sum_{(j_s=1)}^{(j_s=j_{sa})} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\cdot) \\ n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = l_s = 0 \wedge$$

$$j_s \leq j_{sa}^i - 1, j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: (\mathbb{k}, j_{sa}, \dots, j_{sa}^i)$$

$$\geq 3 \wedge l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=2}^{l_{sa}-i^{l-1}} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l-1}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j_s - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$



$$\begin{aligned}
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - l_i)!} \cdot \\
& \sum_{k=0}^{n_i - l_i} \sum_{j_s=1}^{(n_i - l_i - k)} \sum_{j_{sa}=j_{sa}}^{(n_i - l_i - k - j_s)} \\
& \sum_{n_i=n+\mathbb{k}}^n (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) n_{js}=n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k} \\
& \frac{(n - \mathbb{k})!}{(n - \mathbb{k})! \cdot (n - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& (D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee \\
& (D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\
& (D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik})) \wedge \\
& D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge
\end{aligned}$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
 \end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{(l_s - j_s - k + 1)} \sum_{i=1}^{(n - j_s + 1)} \sum_{j_{sa}=n-D}^{n - l_{sa} - j_s + 1}$$

$$\sum_{n_i=n+1}^n \sum_{n_{sa}=n-j_{sa}+1}^{(n_i - j_{sa} + 1)}$$

$$\frac{(n_i - j_{sa} - 2)!}{(n_i - n_{sa} - j_{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_s + s - n - l_i} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{j_{sa}=j_s + j_{sa} - 1}$$

$$\sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik} + j_{sa}^{ik} - j_{sa} - 1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & S_{l_s, j_{sa}}^{DOSL} \sum_{i=0}^{l-1} \sum_{(j)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_s + j_{sa} - k + 1} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_i - j_s + 1)}^{(n_{is} + j_s - j^{sa} - \mathbb{K})} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{is} + j_s - j^{sa} - \mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{l_{ik} + j_{sa} - i^l - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}^{l_{ik} + j_{sa} - i^l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{K} + 1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(s-1)!}{(n-l)! \cdot (s)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D+l_s)!}{(D+j_{sa}+s-n+l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \wedge D + l_s + j_{sa}^{ik} - j_{sa} - 1$$

$$D > n < n \wedge n = \mathbb{k} \geq 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa} - 1$$

$$s; \{j_{sa}^s, l_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_s - \mathbb{k} \wedge$$

$$\mathbb{k}_{s+2} = j_s - s$$

$$\begin{aligned}
f_Z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_s} \sum_{(j_s=l_{ik}-D-j_{sa}^{ik}+1)}^{(l_s-1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}^{ik}+1} \\
& \sum_{n_{is}=n+l_k-j_s+1}^n \sum_{n_{sa}=n+l_k-j_s+1}^{n_{is}+j_s-j^{sa}-l_k} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{(j_s=1)}^{(l_s-1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+1)}^{(l_s-k+1)} \sum_{(j_{sa}=D-j_{sa}^{ik}+1)}^{(D-j_{sa}^{ik}+1)} \sum_{j_{sa}=1}^{j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - l_i) < \mathbf{n} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s}^{DO} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(n - k - 1)!}{(n - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-i^{l-s}+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{K}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{( )} \\
& \frac{(D+l_s-j_s+1)!}{(n+l_s-j_s+1)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D+l_s)!}{(D+j_{sa}+s-n+l_s-j_{sa})! (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (j_{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{j_{sa} = l_s + j_{sa} - k} \sum_{j_{sa} = l_s + j_{sa} - k}^{j_{sa} = l_s + j_{sa} - k} \frac{(j_{sa} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \sum_{n_i = n + \mathbb{k} - j_s}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa} = l_s + j_{sa} - k + 1}^{l_{sa} - k + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot
 \end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-k}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{j^{sa}=n-k+1}^{j^{sa}-k+1} (n_{sa}-n-k+1) j^{sa}+1$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa}^l - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^l, l_{sa}^l, j_{sa}^s, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} \neq j_{sa} + \mathbb{K} \wedge$$

$$\mathbb{K}_{Z,1} = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l-1} \sum_{(j_s+\mathbf{n}-D-s+1)}^{-(k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=1}^{\infty} \sum_{l=1}^{\infty} \sum_{j_s=1}^{\infty} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l^{s-1}+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{sa}=n-j^{sa})}^{(n_i-j^{sa}-\mathbb{K}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n_{sa} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_s - j_{sa} + 1)!}{(l_{sa} - j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j^{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s-k+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{n-D-s+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{(n_i-j_s+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}.$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{(l_s - j_s - 1)} \sum_{i=1}^{(j_s - 1)} j^{sa} - i^{l+1} + \mathbf{n} - D$$

$$\sum_{n_i=\mathbf{n}+1}^{\mathbf{n}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i - j^{sa} + 1)}$$

$$\frac{(n_i - j^{sa} - 2)!}{(n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s = \mathbf{n} - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - 1 \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D > \mathbf{n} \leq n \wedge l_s = \mathbf{n} - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = 0$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \quad \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \cdot \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - j_{sa} + 1)!}{(D + l_{sa} - j_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \cdot \\
& \quad \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \cdot \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-l_{sa}+1}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}-j_s-j_{sa}-\mathbb{k}} \\
& \frac{(n_{is} - n_{is} - 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{is} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(n - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{j_{sa}}^{SD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} + l_{sa} - j_{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-l_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}-j_s-j_{sa}-\mathbb{k}} \frac{(n_{is}-j_s-j_{sa}-\mathbb{k})!}{(n_{is}-j_s+1)! \cdot (n_{is}-j_s-j_{sa}-\mathbb{k})!} \cdot$$

$$\frac{(n_{is}-n_{is}-1)!}{(n_{is}-2)! \cdot (n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-s-\mathbb{k})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot$$

$$\frac{(l_s-k-1)!}{(n-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{z,s}^{l_s, j_{sa}^{sa}} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+j_{sa}-k} \right. \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(\mathbf{l}_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} + j_{sa} - \mathbf{l}_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{lk}}^{l_{ik}+j_{sa}-k-j_{sa}^{lk}+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s)}^{n_{is}-j_s-j_{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - k)!} \cdot \\
& \frac{(n_{is} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{( )} \\
& \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_{sa}}^{D, \mathbf{s}} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(D + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_s^{ik}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-j_s^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}-j_s+1)} \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}
\end{aligned}$$



$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}.$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik})$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq n < n \wedge l_s > 0 \wedge$$

$$j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$S: \{j_{sa}^s, \dots, \mathbb{k}, \dots, j_{sa}^i\} \quad S: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > n - l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 =$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s)}^{(j^{sa}=l_s)} \sum_{l_s+j_{sa}-k}^{l_{sa}+j_{sa}-k} \frac{(j^{sa}-j_s-1)!}{(j_s-j_s+1)!} \cdot \frac{n_{is}+j_s-j^{sa}-\mathbb{k}}{n_{sa}=n-j^{sa}+1} \right) \cdot \\
& \frac{(n_i - n_{is} - 1)!}{(i - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=D+l_s+j_{sa}-n+l_i+1}^{n+l_i-j_s+1} \sum_{j_s=l_s-k+1}^{(l_s-k+1)-k+1} \sum_{j^{sa}=l_{sa}+n-D}^{j^{sa}=l_{sa}+n-D} \\
& \sum_{n+l_{sa}-j^{sa}+1}^n \sum_{n+l_{sa}-j_s+1}^{n+l_i-j_s+1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l) \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - l - 1)! \cdot (n - 2)!} \cdot$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - \mathbf{n} - l - j_{sa})! \cdot (n - j_{sa} - j_{sa} - 1)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right. \\
 & \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-n}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-k-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa}-k)!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D+l_s+j_{sa}-n-l_{sa}-s)!}{(D+l_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\
 & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
 & \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-k-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa}-k)!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \left. \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \right)
 \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_i+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (\mathbf{n} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} j^{sa} = j_{sa}-1$$

$$\sum_{n_i=n}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^n$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n - s - I)!}{(n_i - n - I)! \cdot (n - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$D \geq n < n + 1 \wedge D - l_i > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s, \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s, \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - \mathbf{n} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - \mathbf{n} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{l=1}^{D+l_s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1) \atop j_{sa}=l_{ik}+n+j_{sa}-j_{sa}^{ik}} \sum_{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \frac{(n_{is}-j_s+1) \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_{is}-j_s+1)} \sum_{j_{sa}=1}^{n_{is}+j_s-j_{sa}-1}}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{is}-k-1)!}{(n_{is}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa}-k)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} - \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1) \atop j_{sa}=l_i+n+j_{sa}-D-s} \sum_{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_{is}-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_i-s-l)!}{(n_i-n-l)! \cdot (n-s)!}.$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$fz_{j_s}^{SD} = \sum_{k=1}^{\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_s+\mathbf{n}+j_{sa}-D-1}^{l_s+j_{sa}-k} \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_{is} - j_{sa} - j^{sa} - \mathbb{k})!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge \mathbf{n} + j_{sa} - s > 0 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=\mathbf{l}_{sa}-j_s-1}^{j_{sa}=\mathbf{l}_{sa}-j_s-1}$$

$$\sum_{n_i=\mathbf{n}}^{\mathbf{n}} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{n_{ik}=\mathbf{n}_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(\mathbf{n}_i - \mathbf{n} - I)!}{(\mathbf{n}_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_i > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa}^{ik} + 1 \wedge$$

$$j_s + j_{sa}^{ik} - 1 \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + \mathbf{l}_i = \mathbf{l}_s \wedge \mathbf{l}_{sa} - j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D > \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s \in \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - j_{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n - j^{sa} - 1)!}{(n_{is} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - n_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{D+l_{sa}-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \\
 & \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(\mathbf{l}_s-k+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+\mathbb{k}}^{j_s-j_{sa}-\mathbb{k}} \frac{(n_i - \mathbf{l}_s - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(\mathbf{l}_s-k+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$



$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{z=1}^{DOSD_{j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{ik}+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} + l_{sa} - j_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} \sum_{j_s=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{i-j_s+1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$



$$\begin{aligned}
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=\mathbf{j}_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_i - \mathbf{n} - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot \\
& \frac{(l_s - l_{is} - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{is} - l_s - j_s + 1)!}{(l_{is} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=\mathbf{j}_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\sum_{k=1}^{D-1} \sum_{j_s=1}^{(j^{sa}-j_s-1)} \sum_{j_{sa}=l_{ik}+n-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=l_{sa}+n-D}^{n_{is}+j_s-j_{sa}^{ik}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$



$$\begin{aligned}
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_s^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - l_s - j_s + 1)!}{(l_s + l_{sa} - j^{sa} - \mathbf{n})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(n + j^{sa} - l_i - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_s=j_{sa}-j_{sa}+1}^{D+l_s-\mathbf{n}-l_i} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{z \cup j_s}^{SD} = \sum_{k=1}^{n+1} \sum_{(j_s - l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_{sa} + j_{sa} - D - j_{sa})} \sum_{j_{sa} = l_{sa} + n - D}^{l_{sa} - k + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$



$$\begin{aligned}
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s + 1)!}{(l_{sa} - j^{sa} - \mathbf{n} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{l_s+j_{sa}-k}^{l_s+j_{sa}-k} \sum_{n_{is}+j_s-j_{sa}-\mathbb{k}}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \sum_{n_i=n+\mathbb{k}}^{(n_i-i_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - l_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{(j_s=j_{sa}-j_{sa}+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(j_s=j_{sa}-j_{sa}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(j_s=j_{sa}-j_{sa}+1)} \\
& \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_t)!}{(D + j^{sa} + s - \mathbf{n} - l_t - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s)} \sum_{n_{sa}=n-j_{sa}^{sa}-\mathbb{k}}^{n_{is}+j_s-j_{sa}^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa}^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j_{sa}^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s - l_{sa} - j_{sa}^{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{is}+j_s-j_{sa}^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa}^{sa} - \mathbb{k})!} \cdot$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{\substack{(l_s-k+1) \\ (j_s=l_{ik}+\mathbf{n}-D+l_s-k+1) \\ j^{sa}=j_s+j_{sa}-1}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}-j_s+1)}^{(n_{is}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s^{ik}}^{j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D - \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D - \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$



$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{j_s=l_s+n-D}^{j_s=l_s+n-D} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{j_{sa}=l_i+n+j_{sa}-D-s} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{j_s=l_s+n-D}^{(l_s-k+1)} \sum_{j_{sa}=l_i+j_{sa}-k-s+1}^{l_i+j_{sa}-k-s+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - 1)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!}$$

$$\frac{(l_s - \mathbb{k} - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_s - j_{sa} - 1)!}{(D + l_{sa} - j^{sa} - l_s)! \cdot (D + j_s - j_{sa} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s-j_{sa}-\mathbf{n}-l_{sa}} \sum_{(i_s=i_{sa}-j_{sa}+1)}^{(i_s=i_{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^k - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{\mathbf{l}_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - \mathbb{k} + 1)!}{(j_s - 2)! \cdot (n_{is} - \mathbf{n} + j_s - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} - 1)!} \cdot$$

$$\frac{(n_{sa} + j^{sa} - \mathbf{n} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1 - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - j^{sa} - \mathbf{n} - k - 1)!}{(n_{sa} - j^{sa} - \mathbf{n} - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} + \mathbf{l}_{sa} - j_{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+\mathbf{l}_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_{sa} - l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j_{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-s)}^{(l_s+j_{sa}-j^{sa}-s)} \cdot$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_{is}+j_s^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_i-j_s+1)} \cdot$$

$$\sum_{(n_{ik}=n_{is}+j_s^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_i-j_s+1)} \cdot$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$((D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbf{n} > 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4, \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_{sa}+\mathbf{n}-D-j_{sa})} \sum_{j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{il-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{l=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=j_s}^{( )} \frac{(n_i - n_{sa} - k - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - k + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n - s)!} + \\
& \left( \sum_{k=1}^{i l - 1} \sum_{j_s=2}^{a - j_{sa}} \sum_{j^{sa}=j_{sa}+2}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \right) \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - k - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - k)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - j_{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - k + 1)!}{(l_{sa} - l_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}-1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (l_i+j_{sa}-j_{sa}-s)!} -$$

$$\sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$D \geq n < n+1 \wedge l_{sa} \leq D-j_{sa}-n \wedge$$

$$1 \leq j_s \leq j_{sa}-j_{sa} \wedge$$

$$j_s+j_{sa} \leq n \leq n+j_{sa}-s \wedge$$

$$l_{ik}-l_{sa}+1=l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} > l_{ik} \wedge$$

$$D \geq n < n+1 \wedge I=\mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^s \leq j_{sa}^{ik}-1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{lk} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \right.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot$$

$$\frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-j_s-1)! (n_i-n_{sa}-j^{sa}-\mathbb{k})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D+j_s-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j^{sa}-\mathbb{k}+1)!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}-s)!} \Big) +$$

$$\left( \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{lk} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right.$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - \mathbb{k} - 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(D + l_{sa} - j^{sa} - l_s)! \cdot (D + j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^n \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - l_s + 1)! \cdot (l_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n - l_i - j^{sa} - s)!}$$

$$\sum_{k=l}^l \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}} \sum_{(n_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (n - s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s = D - \mathbf{n} - 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_s - s \wedge$$

$$l_{ik} - j_s^{ik} + 1 = l_s - j^{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - l_s < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$\mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$



$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n_i-j_s+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-j_s-1)! \cdot (n_i+j_s-n_{sa}-j^{sa}-\mathbb{k})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-j_s-1)! \cdot (n_i+j_s-n_{sa}-j^{sa}-\mathbb{k})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \right)$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - \mathbb{K})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{(j_s - l_s - 1)} \sum_{i=1}^{(j_s - l_s - k)} \sum_{j^{sa}=n+D-s}^{n+D-s+l_s-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i - j_s + 1)}$$

$$\frac{(n_{sa} - n_{sa} - j^{sa} - l_s + 1)!}{(j_s - 2)! \cdot (n_{sa} - j^{sa} - l_s + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) -$$

$$\sum_{k=1}^{j_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s - l_s - 1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(j_s - l_s - 1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_j^{l_{sa}} S_{sa}^D &= \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right. \\ &\quad \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\ &\quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\quad \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(j_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{\mathbf{l}_{sa}-i^{l+1}} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \\
& \frac{(n_i-j_s+1)!}{(n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - l_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1$$

$$D \geq n < n \wedge n = \mathbb{k} > 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} \leq j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_{2-2} = 1 - s$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n_i-j_s+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left( \frac{(D + j^{sa} - \mathbf{n} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_s+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D}^{l-1} \sum_{j_{sa}=\mathbf{n}-j^{sa}-k+1}^{(l_s-1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{(l_s-1) \quad l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{sa}-\mathbf{l}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa})}^{(n_i-j^{sa}-\mathbb{K}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{K} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} - j_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j_{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - \mathbf{l}_{sa})!}{(D + j^{sa} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{(j_s=j^{sa}-\mathbf{l}_s+1)}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{(\quad)} \\
& \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$



$$D + j_{sa}^{ik} - \mathbf{n} < \mathbf{l}_{ik} \leq D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}}^{DOSD} &= \binom{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}}{\mathbb{k}} \\ &\sum_{(j_s = \mathbf{l}_{ik} + \mathbf{n} - D - j_{sa})}^{(\mathbf{l}_s - k + 1)} \sum_{s_{sa} = j_{sa} - 1}^{s_{sa} = j_{sa} - 1} \sum_{n_{is} = j_s - j_{sa} - \mathbb{k}}^{(n_{is} + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{sa} = \mathbf{n} - j_{sa} + 1} \\ &\frac{(n_i - n_{is} - 1)!}{2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \\ &\left( \sum_{k=1}^{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}} \sum_{(j_s=2)}^{(\mathbf{l}_{ik} + \mathbf{n} - D - j_{sa}^{ik})} \sum_{j_{sa} = \mathbf{l}_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{\mathbf{l}_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{n_{is} = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{sa} = \mathbf{n} - j_{sa} + 1} \right) \end{aligned}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1} \sum_{(j_s=l_{ik}+n-j_{sa}-D-j_{sa}^{ik})}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{j_{sa}^{ik}+1}$$

$$\sum_{j_s=\mathbf{n}+\mathbb{k}-j_s+1}^{\mathbf{n}} \sum_{n_{is}=j_s-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - \mathbb{k} + 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(D + l_{sa} - j^{sa} - l_s)! \cdot (D + j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{j_s=1}^{D+1} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-i-l-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}
\end{aligned}$$



$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{is})}^{()}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - l)!}{(l_s - j_s - l - 1)! \cdot (n - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l - j_{sa})! \cdot (n - j_{sa} - j_{sa} - l)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DO} = \sum_{i=1}^{l-1} \sum_{j_s=2}^{(j_s-1)} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+j_s-j_{sa}-k} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{sa}-1)} \frac{(n_i - n_{is} - 1)!}{(i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - k - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - k)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-k}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^l-1} \sum_{(j_s=1)}^{i^l-1} \sum_{j^{sa}=j_{sa}}^{i^{l+1}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} \cdot$$

$$\sum_{k=0}^{\mathbb{k}} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{lk})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_s^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_s^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_s^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} \mathbb{k}_z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{s-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_i-j^{sa}-l_k)}$$

$$\frac{(n_i - n_{sa} - l_k - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - n - l_s - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - l_{sa} - l_s - 1)!}{(l_s - j^{sa} - l_s + 1)! \cdot (j_s - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_s - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_s-k+1} \sum_{(j_s=2)}^{l_s-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-l_k)}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-l_i)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{l_s=j_{sa}+1}^{l_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+1)}^{(n_i-j_s)} \sum_{(n_{sa}=n-j_{sa}+\mathbb{k})}^{(n_{is}+j_s-j_{sa}-\mathbb{k})} \frac{(n_i-n_{sa}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}+1)!} \cdot \frac{(n_{is}-n_{sa}+\mathbb{k}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa}-\mathbb{k})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \sum_{k=l}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{sa}=j_{sa}}^{( )} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-j_{sa}-\mathbb{k}+1)} \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}-\mathbb{k}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} \right) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_s - l_{sa} - s)!}{(D + j^{sa} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n+\mathbb{k}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j^{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j_s - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-l_i)!}.$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}^{ik}-j_s-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+j_{sa}+1)}^{(n_i-j_s)} \sum_{(n_{sa}=n-j_{sa}-\mathbb{k})}^{(n_{is}+j_{sa}-j_{sa}^{ik})} \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j_s-2)! \cdot (n_i-n_{sa}-j_{sa}-\mathbb{k}+1)!} \cdot \frac{(n_{is}-n_{sa}+\mathbb{k}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_{sa}-n_{sa}-j_{sa}^{ik}-\mathbb{k})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!} + \sum_{k=l}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{sa}=j_s}^{( )} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-j_{sa}-\mathbb{k}+1)} \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}-\mathbb{k}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} \right) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa} - k + 1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - i^{l-1} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - j_s + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa} - i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{K}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{K} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}-1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} -$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$((D \geq n < n+1 \wedge l_s \leq D-n+1 \wedge$$

$$1 \leq j_s \leq j^{sa}-j_{sa} \wedge$$

$$j_s+j_{sa} \leq n+j_{sa}-s \wedge$$

$$l_{ik}-j_{sa}+1=l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} > l_{ik} \wedge$$

$$D+j_{sa}-n < l_{sa} \leq D+l_{ik}+j_{sa}-n-j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D-n+1 \wedge$$

$$1 \leq j_s \leq j^{sa}-j_{sa} \wedge$$



$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right.$$

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j_s=2}^{(j_s-1)} \sum_{j^{sa}=l_{sa}+j_s-k}^{l_{sa}-k} \right)$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{j^{sa}+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j_s=2}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D}^{i^{l-1}} \sum_{j_s=1}^{(l_s-1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(n_i - n_{is} - 1)!}{(i - \mathbb{k} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{( )} \sum_{j_s=1}^{l_{sa}-i^{l+1}} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)}$$



$$\begin{aligned}
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+\mathbf{n}+j_{sa}-j^{sa})}^{( )} \sum_{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k}+j_s-1)}^{( )} \sum_{(n_{ik}=n_{is}+j_s^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i - j_s + 1)!}{(n_i - \mathbf{n} + \mathbb{k} - j_s + 1)!} \cdot \\
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D - j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$(l_{ik} - j_{sa}^{ik} + j_s^{ik} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < \mathbf{l}_{ik} \leq D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \mathbb{k} \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}; z = 1 =$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \right.$$

$$\sum_{(j_s=\mathbf{l}_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{j_s=2}^{(l_s-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \frac{(n_i - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - \mathbb{k} + 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l} \sum_{j_s=1}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot
\end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} j^{sa} = j_{sa}-1$$

$$\sum_{n_i=n}^n \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}}^{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(n - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$



$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$\begin{aligned} \epsilon_z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{n_i=n+\mathbb{K}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{n_{is}+j_s-j_{sa}-\mathbb{K}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}-j_{sa}+1} \\ & \frac{(n_i - n_{is} - 1)!}{(i - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \end{aligned}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{l_i=l_s+1}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \mathbb{k})!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge l_i + j_s - s > l_s \wedge$$

$$l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \mathbb{k} \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k} : z = 1 =$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{l(j_s=1)}^{( )} \sum_{j^{sa}=j_s}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} + j^{sa} - \mathbf{n} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{( )} \sum_{l(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{( )}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}.$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - 1 \geq l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{()}{l}} \sum_{(j_s=1)}^{()}{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_s=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(\mathbf{n} - j^{sa} - 1)!}{(n + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{i=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-\mathbf{n}+1)}^{\binom{()}{l}} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{\binom{()}{l}}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((\mathbf{n} - \mathbf{l}_i < \mathbf{n} \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$



$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-\mathbb{k}+1)}^{(j_s=j^{sa}-\mathbb{k}+1)} \sum_{j^{sa}=j_{sa}}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j_s+1)} \sum_{j^{sa}=j_{sa}}^{n_{sa}+j_s-j^{sa}-\mathbb{k}+1} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \frac{(n_{sa} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(j_s=j^{sa}-\mathbb{k}+1)} \sum_{j_s=1}^{(j_s=j^{sa}-\mathbb{k}+1)} \sum_{j^{sa}=j_{sa}}^{(j_s=j^{sa}-\mathbb{k}+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i - s - l)!}{(\mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k)!}{(l_s - j_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{n})!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=1}^{(\quad)} \sum_{j_s=1}^{(\quad)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$j_s < j_{sa} < \mathbf{n} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=j_{sa}-1)}^{(n_i-j_{sa}+1)} \sum_{(n_{is}=n-j_{sa}+1)}^{n_{is}+j_{sa}-\mathbb{k}} \sum_{(n_{sa}=n-j_{sa}+1)}^{n_{sa}+j_{sa}-\mathbb{k}} \frac{(n_i-j_{sa}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}+1)!} \cdot \frac{(n_{is}-n_{sa}-\mathbb{k}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_{sa}-n_{sa}-j_{sa}-\mathbb{k})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-j_{sa}-\mathbb{k}+1)} \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}-\mathbb{k}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} -$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(D+l_s+s-n-l_i-j_{sa})!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(D+l_s)!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_s \leq D + s - 1 \wedge$$

$$D \geq n < n \wedge l = 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}^{i_1}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \wedge$$

$$\begin{aligned}
fz S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{i^{l-1} (l_{sa}-k-j_{sa}+2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}
\end{aligned}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - l_{sa} - s)!} +$$

$$\sum_{j_s=2}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^n \sum_{i=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j_{sa}=j_s}^{( )} \frac{(n_i - s - \mathbb{k})!}{(n_i - n + \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D + s - n - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbb{k} > 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - l_{sa} - s)!} +$$

$$\sum_{j_s=2}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_s}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n (n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1) \sum_{n_{sa}=n-l_i-j_{sa}+j^{sa}-\mathbb{k}}^{( )}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - n + \mathbb{k})! \cdot (n - s)!}.$$

$$\frac{(D + s - n - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}.$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}$$

$$D \geq n < n, l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: n \geq 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_i-1} \sum_{l=2}^{l_i-k-1} \sum_{j^{sa}=l_k+j_{sa}-k-j_{sa}^{ik}+2}^{l_i+l_{sa}-k-1} \frac{(l_{ik}-k-1)!}{(l_i-1)!} \cdot \frac{(l_{sa}-l_s-j_{sa}+1)!}{(j_s+l_{sa}-j^{sa}-l_s)!} \cdot \frac{n_{is}+j_s-j^{sa}-\mathbb{k}}{n_{sa}=\mathbf{n}-j^{sa}+1} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_i-1} \sum_{l=1}^{l_i-k-1} \sum_{j^{sa}=l_i+l_{sa}-k-j_{sa}-D-s}^{l_i+j_{sa}-l-l-s+1} \frac{(l_{ik}-k-1)!}{(l_i-1)!} \cdot \frac{(l_{sa}-l_s-j_{sa}+1)!}{(j_s+l_{sa}-j^{sa}-l_s)!} \cdot \frac{n_{is}+j_s-j^{sa}-\mathbb{k}}{n_{sa}=\mathbf{n}-j^{sa}+1}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-\mathbb{k}+1)}^{(l_{ik}-l_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j_{sa}=l_i-\mathbb{k}-D-s)}^{(l_{ik}-l_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j^{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (j_{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik}} \sum_{j_{sa} = l_{ik} + j_{sa} - k - j_{sa}^{ik} + n - D}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_{sa} - l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa} = l_{ik} + j_{sa} - k - j_{sa}^{ik} + 2}^{l_{sa} - k + 1} \\ & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-k}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n+\mathbb{k}}^{n-j^{sa}-\mathbb{k}+1} (n_{sa}-n_{ik}-j^{sa}+1)$$

$$\frac{(j^{sa} - 2)! \cdot (n_{sa} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_{sa} - n_{sa} - j^{sa} - \mathbb{k} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s}^{D-s} &= \sum_{k=1}^{l_i-D-s} \sum_{(j_s=2)}^{l_i+j_{sa}-k-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ &\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{K}}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s = \mathbf{l}_i + \mathbf{n} - D - s + 1)}^{(\mathbf{l}_{ik} - k - j_{sa}^{ik} + 2)} \sum_{j^{sa} = j_s + j_{sa} - 1}^{\mathbf{l}_i + j_{sa} - k - s + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{is} + j_s - j^{sa}}$$

$$\frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(j_s - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa} = \mathbf{l}_i + \mathbf{n} + j_{sa} - D - s}^{\mathbf{l}_i + j_{sa} - i^{l-s+1}}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{k} + 1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$



$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(s-1)!}{(n-l)! \cdot (s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-s)!}{(D+j^{sa}+s-n-l_{sa}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(j_s + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} l_{sa-k+1} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_i} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}}^{(n_i-j^{sa}-l_{sa})} \frac{(n_i-j^{sa}-l_{sa})!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j^{sa}+1)!} \cdot \\
& \frac{(n_i-1)!}{(n_i+j^{sa}-n_{sa})! \cdot (n-j^{sa})!} \cdot \\
& \frac{(l_{sa}-l_s-1)!}{(l_{sa}-j^{sa}-l_s+1)! \cdot (j_s-j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n_i-j_s+1)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \frac{(n_i-j_s+1)!}{(n_{is}+j_{sa}^{ik}-j_{sa}^{ik})! \cdot (n_{sa}+j_{sa}^{ik}-j_{sa}-l_{sa})!} \cdot \\
& \frac{(n_i-s-l)!}{(n_i-n-l)! \cdot (n-s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} - \\
& \sum_{k=1}^{l_i} \sum_{(j_s=1)}^{(n_i-j_s+1)} \sum_{j^{sa}=j_{sa}}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i-s-\mathbb{k})!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (n-s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} - 0 \wedge$$

$$j_s \leq j_{sa}^i - 1, j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$\geq 4 \wedge l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=2}^{l_{sa}-i^{l-1}} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l-1}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$



$$\begin{aligned}
& \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - l_i)!} \cdot \\
& \sum_{k=0}^{( )} \sum_{j_s=1}^{( )} \sum_{j_{sa}=j_{sa}}^{( )} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) n_{js} n_{ik+j_{sa}-j_{sa}^{ik}-\mathbb{k}} \\
& \frac{(s-\mathbb{k})!}{(\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}-s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - 1 \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee \\
& ((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\
& D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik})) \wedge
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
 \end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{i=1}^{n-i} \sum_{j^{sa}=\mathbf{n}-D}^{n-i-1} j^{sa} + \mathbf{n} - D$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j_s+1)}$$

$$\frac{(n_{sa} - n_{sa} - j^{sa} - \mathbf{n} + 1)!}{(j^{sa} - 2)! \cdot (n_{sa} - j^{sa} - \mathbf{n} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} - s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & S_{i_s, j_{sa}}^{DOSL} \sum_{i=1}^{i^{l-1}(j^{sa}-j_{sa}+1)} \sum_{(j)}^{l_s+j_{sa}-k} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_s + j_{sa} - k + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} - \mathbb{k}}^{n_{is} + j_s - j^{sa} - \mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa} = l_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{l_{ik} + j_{sa} - i^l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{k} + 1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(s-1)!}{(n-l)! \cdot (s)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D+l_s)!}{(D+j_{sa}+s-n+l_{sa}-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \wedge D + l_s + j_{sa}^{ik} - n - 1$$

$$D \geq n < n \wedge n = \mathbb{k} > 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^b \leq j_{sa} - 1 \wedge j_{sa}^i \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s - \mathbb{k} \wedge$$

$$\mathbb{k}_{s-2} = s - 2$$

$$\begin{aligned}
fz S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_s} \sum_{(j_s=l_{ik}-D-j_{sa}^{ik}+1)}^{(l_s-1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}^{ik}+1} \\
& \sum_{n_{is}=n+\mathbb{k}-j_s+1}^n \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{(j_s=1)}^{(l_s-1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}
\end{aligned}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+1)}^{(l_s-k+1)} \sum_{(j_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(D-j_{sa}^{ik}+1)} \sum_{j_{sa}=1}^{j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_i) \leq n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s}^{DO} &= \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-k} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(n - k - 1)!}{(n - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-i^{l-s}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$



$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(j_s - s - 1)!}{(n - l_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j^{sa} + s - n - l_s - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j_{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{j_{sa} = l_s + j_{sa} - k} \sum_{j_{sa} = l_s + j_{sa} - k}^{j_{sa} = l_s + j_{sa} - k} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa} = l_s + j_{sa} - k + 1}^{l_{sa} - k + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{l_{sa}-l+1} \sum_{j^{sa}=l_{sa}+n-k}^{l_{sa}-l+1}$$

$$\sum_{n_i=n+k}^n \sum_{j^{sa}=n_{sa}-j^{sa}-k+1}^{n_{sa}-j^{sa}-k+1}$$

$$\frac{(j^{sa} - 2)! \cdot (n_{sa} - l_s - k - 1)!}{(j^{sa} - 2)! \cdot (n_{sa} - j^{sa} - k + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}.$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \neq j_{sa} + \mathbb{k} \wedge$$

$$\mathbb{k}_{Z^+} = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l-1} \sum_{(j_s+\mathbf{n}-D-s+1)}^{j_s-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=1}^{\infty} \sum_{l=1}^{\infty} \sum_{j_s=1}^{\infty} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l} l^{l-s+1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{sa}=n-j_{sa}}^{(n_i-j_{sa}-\mathbb{K}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{K} + 1)!} \cdot$$

$$\frac{(n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_s - j_{sa} + 1)!}{(l_s - j_s - l_{sa} + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j^{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=1}^{(l_s-k+1)} \sum_{j_{sa}=l_i+n-D-s+1}^{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{n_{is}=n+\mathbb{K}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K}}^{(n_i-j_s+1)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_s^s < j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=0}^{l_s} \sum_{i=1}^{(j_s - k)} \sum_{j^{sa}=n-D}^{n-l_{sa}-i} \frac{(n - l_{sa} - i)!}{(j_s - k - i)! \cdot (n - l_{sa} - j^{sa} - i + 1)!} \cdot \\
& \frac{(n - l_{sa} - j^{sa} - i)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$



$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} DOSD_{sa} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{n_i-j_s+1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \right. \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right) \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(D + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n} \sum_{(j_s=l_s-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_s}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} + j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{is} + j^{sa} - n_{sa} + 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - l_s - j_s + 1)!}{(D + l_s - j^{sa} - s - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - j_{sa} - s)!}{(D + j_{sa} - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{l_i=1}^{D+l_s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$\begin{aligned} & f_Z S_{j_s, j_{sa}}^{DO} \left( \sum_{k=1}^{D+l_s-j_s-l_{sa}} \frac{(D+l_s-j_s-l_{sa}-k-j_{sa})!}{(l_{sa}+n-l_{sa}+j_{sa}+1) j^{sa}=j_s+j_{sa}-1} \right. \\ & \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\ & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\ & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\ & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\ & \left. \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \right) \end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_{ik}=\mathbf{n}-D-j_{sa}^{ik}+1}^{l_{ik}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=j_s+j_{sa}}^{k+1} \\
& \sum_{n_{is}=\mathbf{n}-j_s+1}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (j^{sa} - j_s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(l_s + j_{sa} - j^{sa} - l_s)! \cdot (j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - \mathbf{n} - s)!}{(D + j^{sa} - \mathbf{n} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=\mathbf{n}-D-s+1}^{l_s+s-\mathbf{n}-l_i} \sum_{(l_i+k-j_{sa}^{lk}+2)}^{(l_i+k-j_{sa}^{lk})} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=\mathbf{n}-D-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \binom{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}}{k} \sum_{(j_s = \mathbf{l}_s + \mathbf{n} - D)}^{(\quad)} \sum_{j_{sa} = \mathbf{l}_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{\mathbf{l}_s + j_{sa}} \sum_{n_i = \mathbf{n} (n_{is} = \mathbf{n} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{j_s - j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \Bigg) +$$

$$\binom{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}}{k=1} \sum_{(j_s = \mathbf{l}_s + \mathbf{n} - D)}^{(j_{sa} - j_{sa})} \sum_{j_{sa} = \mathbf{l}_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{\mathbf{l}_s + j_{sa} - k}$$

$$\sum_{n_i = \mathbf{n} (n_{is} = \mathbf{n} - j_s + 1)}^n \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{is} + j_s - j_{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_s=l_s+n-D}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - k)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - 1)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_s - k - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - k + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - \mathbf{n} - l_s - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s-j_s-k+1) \leq l_s} \sum_{(j^{sa}-j_s-k+1) \leq l_i+\mathbf{n}+j_{sa}-D-s}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_s + j_{sa} - j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$



$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{s} \Rightarrow$$

$$f_Z \mathcal{S}_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik})}^{(l_s-k+1)} \sum_{j_{sa}=j_{sa}^{ik}-1}^{j_{sa}^{ik}} \sum_{n_i=n-j_s+1}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa})!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \right)$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik})}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{j^{sa}+1} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - l_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - 1)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{l_i=n-l_{sa}+1}^{(l_s-k+1)} \sum_{j_s=j_{sa}-1}^{(n+l_s-s-n-l_i)} \sum_{n_i=n+1}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_s-j_s+1}^{(n_{is}=n+l_s-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - l - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz S_{j_s, j}^{DOSP} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}+1) \atop j_{sa}=l_{sa}+n-D}^{j_{sa}-k} \sum_{n_i=n}^{(n_i-j_s+1)} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j_{sa}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}+1) \atop j_{sa}=l_{sa}+n-D}^{j_{sa}-k} \sum_{n_i=n}^{(n_i-j_s+1)} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j_{sa}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}+j_s-j_{sa}} \right)$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}-j^{sa}-k+1} \sum_{j_s=l_s+n-D}^{j_s=l_s+n-D} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{j^{sa}=l_s+j_{sa}-k+1} \\
& \sum_{n_i=n-j_s+1}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{j_s=l_s+n-D}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - k + 1)!}{(l_s + j_{sa} - j^{sa} - l_s)! \cdot (j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - \mathbf{n} - l_i - s)!}{(D + j^{sa} - \mathbf{n} - l_i - s)! \cdot (n_{is} - j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(i=j_{sa}+1)}^{(n_{is}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right.$$

$$\sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right.$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-1}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}=n-j_s-j^{sa}+1)}^{(n_i-j_s-j^{sa}+1)} \\
& \frac{(n_{is}-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-n_{is}-j_s+1)!} \cdot \\
& \frac{(n_{is}-1)!}{(j_s-j_s-1)! \cdot (n_{is}+j_s-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_{sa}-n-1)! \cdot (n-j^{sa})!}{(l_s-k-1)!} \cdot \\
& \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_{Z_{j_s}^{sa}}^{QSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\ & \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1} \end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k - 1)! \cdot (k - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_i - j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \mathbf{n} + j_{sa} - s > 0 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \dots \Rightarrow$$

$$j_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+1}^n \sum_{n+1}^{(j_s+1)} \sum_{n+1}^{(j_s+1)}$$

$$\sum_{n_{ik}=n+1}^{(\quad)} \sum_{(n_{sa}=n+1)}^{(\quad)} \sum_{j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{j_{sa}^{ik}}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + j_s - j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s \cdot j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1, j_{sa}^{i+1} \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^{s+1}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s \leq s \Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i - l_{sa} - 1)!}{(D + j^{sa} - n - l_i - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-n} \sum_{(j_s=j_s+1)}^{(l_s-j_s+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{(n_i-j_s+1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k = 0 \wedge$$



$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_s-j^{sa}} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}} \\ & \frac{(n_{is}-\mathbf{n}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \\ & \frac{(n_{is}-\mathbf{n}-2)!}{(j_s-j_s-1)! \cdot (n_{is}+j_s-j^{sa})!} \cdot \\ & \frac{(n_{sa}-j_{sa}-\mathbf{n}-1)!}{(n_{sa}-j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\ & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}^2-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} \cdot \\ & \sum_{k=1}^{D+j_{sa}+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_s-j^{sa}} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{lk}}^{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \\ & \frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \\ & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \frac{(D-l_i)!}{(D+j_{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} \end{aligned}$$



$$D \geq \mathbf{n} < \mathbf{n} \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-j_{sa}+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_{sa}=j_s+j_{sa}-1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \\ & \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{(n_{is}+j_s-j_{sa})} \\ & \frac{(n_i - n_{is} - 1)!}{(i - \mathbb{k} - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(n - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\ & \sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa}^{ik} - s > l_s \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$j_s, j^{sa} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s-k}}^{(n_{is}-j_s+1-k)} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(n_{is}-j_s+1-k)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - l - l_{sa} - s)!}{(n_i - n - l)! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - n_{ik} - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{ik} - j_{sa} + k = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l_s = l_k = 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^{s-1}, \dots, j_{sa}^1\} \wedge$$

$$s \geq 1 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D-n+1} \sum_{j_s=l_{ik}+n-j_{sa}+1}^{l_{ik}-k-j_{sa}+1} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}+2}^{l_{ik}+1}$$

$$\sum_{n_{is}=n-j_s+1}^n \sum_{n_{sa}=n-j^{sa}+1}^{n_i-j_s+1} \sum_{j^{sa}=n_{is}+j_s-j^{sa}}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k - 1)! \cdot (k - 2)!}.$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_i - j_{sa} - j^{sa} - s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \mathbf{n} + j_{sa} - s = \quad \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \quad \Rightarrow$$

$$fz_{j_s, j_{sa}}^{OSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_i+\mathbf{n}-D-s)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+l_{sa}-k-s+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{j^{sa}} \\
& \frac{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - 1)! \cdot (n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+l_{sa}-k-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}
\end{aligned}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}.$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = \dots \Rightarrow$$

$$j_{2s}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j^{sa}=l_{ik}+j_{sa}-j_{sa}^{ik}+2)}^{l_{sa}-k+1} \sum_{(n_{is}=n-j_s+1)}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s + 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{(n_i=n+\mathbb{k})}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}
\end{aligned}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}.$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-j_s+1)} \frac{(n-j_s+1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-j_s+1)} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}
\end{aligned}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOS} \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}-1)} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} - 1)!} \cdot$$

$$\frac{(n_{sa} + j^{sa} - \mathbf{n} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot j^{sa}!} \cdot$$

$$\frac{(j_s - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+j_{sa}-\mathbf{l}_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\ )} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{l, D} = \sum_{k=1}^{D-n} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik})}^{(l_{ik}+n-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1} \sum_{n_{is}=n-j_s+1}^n \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(D + l_{sa} - j^{sa} - l_s)! \cdot (D - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s-j_{sa}-\mathbf{n}-l_{sa}} \sum_{(i=l_s-k-D-j_{sa}^{ik}+1)}^{(i=l_s-k-D-j_{sa}^{ik}+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOS} = \sum_{k=1}^{D-s} \sum_{(j_s=l_s+n-D)}^{j_{sa}+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_s+j_{sa}-k-s+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - \mathbf{n} + j_s - 1)!} \cdot$$

$$\frac{(n_{is} - \mathbf{n} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - \mathbf{n} - j^{sa} - 1)!} \cdot$$

$$\frac{(n_{sa} + j_s - \mathbf{n} - 1)!}{(n_{sa} + j_s - \mathbf{n} - 1)! - j^{sa}} \cdot$$

$$\frac{(j_s - \mathbf{n} - k - 1)!}{(j_s - \mathbf{n} - k - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} + j_{sa} - j^{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{\mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_s+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s =$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ &\quad \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-s+1}^{\mathbf{l}_i+j_{sa}-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j^{sa}} j^{sa+1}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}}^{D, 0} &= \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(j_s=\mathbf{l}_s+\mathbf{n}-D)+j_{sa}-k} \sum_{j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{(j_{sa}=\mathbf{l}_{sa}+\mathbf{n}-D)+j_{sa}-k} \\ &\quad \sum_{n_i=\mathbf{n}-j_s+1}^{(n_i=\mathbf{n}-j_s+1)+n_i-j_s+1} \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_{is}=\mathbf{n}-j_s+1)+n_{is}+j_s-j_{sa}} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{(n_{sa}=\mathbf{n}-j_{sa}+1)+n_{sa}+j_{sa}-j_{sa}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\quad \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\quad \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ &\quad \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ &\quad \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_s-k+1)} \sum_{j_{sa}=\mathbf{l}_{sa}+j_{sa}-k+1}^{\mathbf{l}_{sa}-k+1} \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(l_s + l_{sa} - j^{sa} - l_s)! \cdot (j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+s-\mathbf{n}-l_i} \sum_{(i_s=i_s, n_{sa}+1)}^{(i_s=i_s, n_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l} = \mathbb{k} = 0 \wedge$$

$$j_{sa}^{s-1} - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$



$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s_{ik}}} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{is}-j_{sa}+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - n_{ik} - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + l_i)!}{(D + j^{sa} - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} > l_s$$

$$D \geq n < n \wedge l_{sa} = 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^{s_{ik}}, j_{sa}^i\} \wedge$$

$$s \geq s_{ik} = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right)$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - s)!} + \\
& \sum_{j_s=2}^{(j_s)} \sum_{j^{sa}=j_{sa}}^{(j_s)} \sum_{n_i=n}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}+1)} \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \right) + \\
& \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n}^n \sum_{n_{is}=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{l_{sa}-l+1} \frac{(j^{sa}-l_{ik}+j_{sa}-j_{sa}^{ik}+2)!}{(j_s-1)! \cdot (n_{is}-n-j_s+1)! \cdot (n_{sa}-n-j^{sa}+1)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=1)}^{l_{sa}-l+1} \sum_{j^{sa}=j_{sa}+1}^{l+1} \frac{(n_i - j^{sa} + 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_i+j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i+j_s+1)}$$

$$\sum_{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{n_{is}-j^{sa}} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}-j^{sa}} \frac{(n_i-n_{sa}-1)!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j_s+1)!} \cdot \frac{(n_{is}-j_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}-j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{(n_i-j^{sa}+1)} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)} \frac{(n_i-n_{sa}-1)!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j^{sa}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}-s)!} \right) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_s}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_{sa} - 1)!}{(l_s - l_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}+1} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{l_i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s-1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \\
& \frac{(l_s-\mathbb{k}-1)!}{(l_s-\mathbb{k}+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} - \\
& \sum_{k=l}^{(\quad)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \\
& \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge I \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq \mathbf{n} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - \mathbb{k} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{s} \Rightarrow$$

$$f_{zs} S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j_{sa}-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \right)$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-j_{sa}^{ik}+2}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_{sa}-l_s+1} \sum_{j_s=1}^{j^{sa}-j_{sa}+1} \sum_{n_i=n}^n \sum_{n_{sa}=n+l_k}^{n_{sa}=n+l_k+j_s+1} \frac{(n_i - j^{sa} - 1)!}{(j^{sa} - j_s - j_{sa} - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_{Z^s} S_{j_{sa}}^{l_{sa}, D} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right.$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} + l_{sa} - j_{sa} - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-l_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i+j_s-j^{sa})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}+l_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_s}^{(n_{is}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{is}-\mathbb{k})}^{(n_i-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa}^{is} - j^{sa} - s - l_{sa} - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k)!}{(l_s - j_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + j_{sa}^{is} - n - l_i - j_s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + j_{sa} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq j_s + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{is} \geq l_s \wedge l_{sa}^{is} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} < D + l_s - j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} = j_{sa} \wedge$$

$$j_{sa} \leq j_{sa}^l - j_{sa}^s \leq j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^l, j_{sa}^l - 1, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge s = j_{sa}^l \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j^{sa} - \mathbf{n} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j^{sa} - l_{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_s)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D-j_{sa}+n-j^{sa}+1}^{l_s-1} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{(l_s-1) \quad l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=1}^{\infty} \sum_{l=1}^{\infty} \sum_{j^s=1}^{l_s} \sum_{j^s=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j_{sa})}^{(n_i-j_{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j_{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{j_s=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{j^s=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$



$$D + j_{sa}^{ik} - \mathbf{n} < \mathbf{l}_{ik} \leq D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \binom{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}}{k} \\ & \sum_{k=1}^{(\mathbf{l}_s - 1)} \sum_{j_{sa} = \mathbf{n} - D - j_{sa}^{ik} + j_s + j_{sa} - 1}^{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n}^{(n_i - j_s)} \sum_{n_{is} = n - j_s + 1}^{n_{is} - j_s} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{sa} - j_{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left( \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \right) + \\ & \left( \sum_{k=1}^{D + \mathbf{l}_s + j_{sa} - \mathbf{n} - \mathbf{l}_{sa}} \sum_{(j_s=2)}^{(\mathbf{l}_{ik} + \mathbf{n} - D - j_{sa}^{ik})} \sum_{j_{sa} = \mathbf{l}_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{\mathbf{l}_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \right. \\ & \sum_{n_i = n}^n \sum_{n_{is} = n - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa}} \\ & \left. \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \right) \end{aligned}$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(i - l - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=1)}^{l_{ik}+j_s} \sum_{j^{sa}=j_s+l_k+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_s} \cdot \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(l_s-k+1)} \cdot \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$



$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_s=l_s+1)} \sum_{j_{sa}=l_s+j_{sa}-k+1}^{j_{sa}=j_{sa}+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_{is}=j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_{is}=j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{i=1}^{l-1} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_s}^{l_s+l+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}+j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - j^{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$







$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_t \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_z^{DOSD} = & \sum_{k=1}^{i^t} \sum_{i_s=2}^{i^t-k+1} \sum_{j_{sa}=j_s+j_{sa}-1}^{i^t-k+1} \\ & \sum_{n_i=\mathbf{n}}^{(n_i-j_s)} \sum_{n_s=\mathbf{n}-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=i}^{( )} \sum_{j_s=1}^{l_{sa}-i} \sum_{j^{sa}=j_{sa}}^{l+1} \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} + 1)!} \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \\
& \sum_{k=1}^{l_s-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{sa}=1}^{j_s-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\ )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(\mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \\
& \sum_{k=l}^{(\ )} \sum_{(j_s=1)} \sum_{j_{sa}=j_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\ )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n})$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n})) \wedge$$

$$(D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$



$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \right. \\
 & \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \right. \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
 & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \right) + \\
 & \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-k} \right. \\
 & \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}
 \end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{i=1}^{l_s - (l_s - k + 1)} \sum_{j_s=1}^{l_s - k + 1} \sum_{j^{sa}=l_s + j_{sa} - k + 1}^{l_s + 1} \\
& \sum_{n_{is}=\mathbf{n} - j_s + 1}^n \sum_{n_{sa}=\mathbf{n} - j^{sa} + 1}^{(n_i - j_s + 1)} \sum_{n_{sa}=\mathbf{n} - j^{sa} + 1}^{n_{is} + j_s - j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{i=1}^{( )} \sum_{j_s=1}^{l_{sa} - i + 1} \sum_{j^{sa}=j_{sa}+1}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} + 1)!} \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j_s - j_{sa})!} \\
& \frac{(D + j_{sa} - l_i - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{( )} \sum_{j_{sa}=j^{sa}-j_{sa}+1}^{l_s+j_{sa}-k} \sum_{j_s=j_s+1}^{( )} \\
& \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{( )} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_k - j_{sa}^s)!}{(n_i - n - l_k)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n})$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n})) \wedge$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$



$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \right. \\
 & \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k + 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \right. \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
 & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \right) + \\
 & \left( \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
 & \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}
 \end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+1}^{i^{l+1}} \cdot \\
& \sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \cdot \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \mathbb{k})!} \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=0}^{\mathbf{n}} \sum_{(j_s=1)}^{\mathbf{n}} \sum_{j_{sa}=j_{sa}}^{\mathbf{n}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1) \vee$$

$$1 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} \leq l_{sa} \leq D - (l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D > \mathbf{n} \leq n \wedge l_s = D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$_{fz} S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \right.$$

$$\sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(D + j_{sa} - l_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-l_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i+j_s-j^{sa})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s-1}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - l - l_{sa} - I - j_{sa}^s)!}{(n_i - n - l)! \cdot (n_{is} - n - l_{sa} - j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k)!}{(l_s - j_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa} - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{sa} + j_{sa} - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz^{OSD}_{j^{sa}} = \binom{D+l_s+j_{sa}-\mathbf{n}-l_{sa}}{k=1} \sum_{j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1}^{j_s-k+1} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Big) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left. \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \right)
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{sa} \leq D + l_{ik} + j_{sa}^{ik} - n - j_{sa}^{ik} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-j_s}^{l_{sa}-k+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)!(n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}-j_s-j_{sa}+1)!}{(j_s+l_{sa}-j_s-l_{sa})! \cdot (j^{sa}-j_s-j_{sa}+1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i-n_{is}-1)!}{(j_s-2)!(n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)!(n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{(i=1)}^{(n)} j^{sa} = l_i + n - D \\
& \sum_{n_i = n + l_k}^n \sum_{n_{sa} = n - j^{sa} + 1}^{(n_i - j_s + 1)} \\
& \frac{(n_i - j_s - 2)!}{(n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_s - n - l_{sa}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{(n)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - k} \\
& \sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(n)} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - l_k)}^{(n)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{j_s=j^{sa}-j_{sa}+1}^{l-1} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \\ & \sum_{n_i=n}^{n} \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{l-1} \sum_{j_s=1}^{l-1} \sum_{j^{sa}=j_{sa}}^{l-1} \end{aligned}$$



$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - 1)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-j_s+1)}^{(j_s=j_{sa}-j_s+1)} \sum_{j_{sa}=j_{sa}+1}^{(j_{sa}=j_{sa}+1)}$$

$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^{(n_{ik}=\mathbf{n}+\mathbb{k})} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_s}^{(n_{ik}=\mathbf{n}_{is}+j_s)} \sum_{j_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k}}^{(j_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=\mathbf{l}}^{(\mathbf{l})} \sum_{(j_s=1)}^{(j_s=1)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=\mathbf{n}_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_{ik}=\mathbf{n}_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}$$



$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz S_{j_s}^{CD} = \sum_{k=1}^{l_s-1} \sum_{(j_s=j_s-k+1)}^{(j_s=j_s-k+1)} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}}^{(n_i-j_s)} \sum_{n_s=\mathbf{n}-j_s+1}^{(n_i+j_s-j^{sa})} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=1)}^{(j_s=1)} \sum_{j^{sa}=j_{sa}}^{(j_s=1)}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} -$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}-j_s-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{( )}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D - j^{sa} + \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D - (\mathbf{n} - n) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} - j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$



$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - i_s - k + 1)!}{(l_s + i_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j^{sa} - n - l_s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\begin{aligned}
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \mathbb{k})!} \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{\mathbf{n}} \sum_{(j_s=1)}^{\mathbf{n}} \sum_{j_{sa}=j_{sa}}^{\mathbf{n}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}
\end{aligned}$$

$$\begin{aligned}
& (D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_s - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge \mathbf{n} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\
& (D + s - l_i < l_i \leq D + j_s + s - \mathbf{n} - j_{sa})) \wedge \\
& D \geq \mathbf{n} < n \wedge l_i > 0 \wedge \\
& j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge \\
& \{j_s^s, \dots, j_{sa}^i\} \wedge \\
& s \geq 3 \wedge \mathbf{s} = s \Rightarrow
\end{aligned}$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - n_{sa} - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(n_{is} - l_{sa} - 1)!}{(n_{is} + j^{sa} - n - 1)! \cdot (n_{is} - n_{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{( )} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{( )}
\end{aligned}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}.$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_{s, j^{sa}}^{i, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{l} \sum_{j_s=1}^{( )} j^{sa}=j_{sa} \\
& \sum_{n_i=n}^n \sum_{n_s=n-j^{sa}+1}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n + j^{sa} - n_{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_{sa}-k-1} \sum_{j_s=2}^{(l_{sa}-k-1)+2} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{( )} \sum_{l} \sum_{j_s=1}^{( )} j^{sa}=j_{sa}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-l_i)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} \geq l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz_{\mathbf{s}, j_{sa}}^{SD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{l}^{( )} \sum_{j_s=1}^{( )} j^{sa}=j_{sa} \\
& \sum_{n_i=n}^n \sum_{n_s=n-j^{sa}+1}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n + j^{sa} - n_{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{(l_{ik}-k-j^{sa}+2)} \sum_{j_s=2}^{( )} \sum_{j^{sa}=j_s+j_{sa}-1}^{( )} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{( )} \sum_{l}^{( )} \sum_{j_s=1}^{( )} j^{sa}=j_{sa}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s}^{DO} &= \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\ &\sum_{n_i=\mathbf{n}}^n \sum_{(n_{is}=\mathbf{n}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n}^n \sum_{(n_i=n-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j_s-j^{sa})}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j^{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(j^{sa} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^l \sum_{(j_s=1)}^{(l)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-l^{l-s+1}}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s_{ik}}-1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k)!}{(l_s - j_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{is} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_s \leq D + l_{is} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq l_s < n \wedge I = \mathbb{k} = 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_{ik}-k-1+2} \sum_{i=2}^{j^{sa}-l_{ik}+j_{sa}-k-j_{sa}^{ik}+2} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{n_i-j_s+1} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_{ik}-k-1+2} \sum_{i=2}^{j^{sa}-l_{ik}+j_{sa}-k-j_{sa}^{ik}+2} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{n_i-j_s+1} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}+j_s-j^{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-l_{sa}+1)}^{(j^{sa}-l_{sa}-k-j_{sa}^{ik}+1)} \sum_{j^{sa}=\mathbf{n}-D}^{j^{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(D + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(\mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j^{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$



$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^l\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i l-1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{j_s=1}^{(l_s - k - 1)} \frac{l_i + j_{sa} - l_s - s + 1}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \sum_{n_i=\mathbf{n}+j_{sa}-j^{sa}+1}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i - j_s + 1)} \frac{(n_i - j_s + 1)!}{(n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{j_s + j_{sa} - \mathbf{n} - l_{sa}} \sum_{(j_s = l_i + \mathbf{n} - D - s + 1)}^{(l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{j^{sa} = j_s + j_{sa} - 1}^{(n_i - j_s + 1)} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \cdot \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(l_s - k - 1)} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(l_s - k - 1)} \cdot \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_s^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_i=n-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=\mathbf{n}-j_s+1)}^{(n_{sa}=j_s-j^{sa})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(j^{sa} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{l_{sa}-i^{l+1}}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$



$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$\mathbf{l}_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} \epsilon_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2, \dots, j_s=l)}^{(l_{ik}-k-j_s+2)} \sum_{j_{sa}=j_{sa}-1}^{l_{sa}-k+1} \\ & \sum_{n_i=1}^n \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i - n_{is} - 1)!}{(i - l)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$

$$\sum_{k=1}^l \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}^{l_{sa}-l+1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=1)}^{(l_{ik}-k-1)} \sum_{j^{sa}=j_s+j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s^{sa}}^{(n_{ik}-k-1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^i \sum_{(j_s=1)}^{(l_i-k-1)} \sum_{j^{sa}=j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{lk}+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(n_i-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!} \cdot$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$\begin{aligned} f_Z S_{j_{sa}}^{RSD} &= \sum_{k=1}^{\mathbf{l}_{sa} + \mathbf{n} - D - j_{sa}} \sum_{(j_s=2)}^{\mathbf{l}_{sa} - k + 1} \sum_{j_{sa} = \mathbf{l}_{sa} + \mathbf{n} - D}^{\mathbf{l}_{sa} - k + 1} \\ &\sum_{n_i = \mathbf{n}}^n \sum_{(n_{is} = \mathbf{n} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j_{sa} + 1}^{n_{is} + j_s - j_{sa}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_s - k - 1)!}{(l_{sa} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}}$$

$$\sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-s-l-j_s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-j_s)!}{(D+j^{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_s - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{ik} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_{ik}^{ik} - n < l_{ik} \wedge D + l_s + j_{sa}^{ik} - j_{sa} - 1$$

$$D > n < n \wedge n = \mathbb{k} = 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa} - 1$$

$$s \in \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_s$$

$$\begin{aligned}
fz S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=0}^{l-1} \sum_{j_s=1}^{l-k} \sum_{j_{sa}=k}^{l-k-j_s+1} \sum_{n_i=n}^{n-j_s+1} \sum_{n_{is}=n-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}+j_{sa}-j^{sa}+1} \\
& \frac{(n_i - n_{is} - 1)!}{(i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=0}^{l-1} \sum_{j_s=1}^{l-k} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j^{sa}+1)}
\end{aligned}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - l_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(l_s+j_{sa}-j_{sa}+1)} \sum_{(j_s=l_{ik}+\mathbf{n}+j_{sa}-D+l_{sa}-k)}^{(l_s+j_{sa}-j_{sa}+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbf{n}+\mathbb{k})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s^{ik}}^{(n_{is}+j_s^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_{ik} + j_{sa}^{ik} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = \mathbf{s} \Rightarrow$$

$$\begin{aligned}
fz S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + j_s - j^{sa} - l_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{l_s=1}^{l_{ik}+j_{sa}-i} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{lk}+1}^{l_{ik}+j_{sa}-i} \frac{(n - j^{sa} + 1)!}{(n - j^{sa} + 1)!}$$

$$\sum_{n_i=n}^n \frac{(n_i - j_{sa} + 1)!}{(n_i - j_{sa} + 1)!}$$

$$\frac{(n_i - j_{sa} + 1)!}{(j^{sa} - 2)! \cdot (n_i - j_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{j_s=l_{ik}+n-D-j_{sa}^{lk}+1}^{D+l_s+j_s-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{lk}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^j\} \wedge$$

$$s \geq 3 \wedge s = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_s + j_{sa} - k} \sum_{j^{sa}=l_i + n + j_{sa} - D - s}^{n_{is} + j_s - j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(\mathbf{l}_s - k - 1)} \sum_{j^{sa}=\mathbf{l}_s + j_{sa} - \mathbf{n} - s + 1}^{\mathbf{l}_s + j_{sa} - i^{l-s} + 1}$$

$$\sum_{n_i=\mathbf{n}}^{(n_i - j_s + 1)} \sum_{n_{sa}=\mathbf{n} - j_s + 1}^{n_{is} + j_s - j^{sa}} \sum_{j^{sa}+1}^{j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\mathbf{l}_s - k - 1)} \sum_{j^{sa}=\mathbf{l}_i + \mathbf{n} + j_{sa} - D - s}^{\mathbf{l}_i + j_{sa} - i^{l-s} + 1}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{(n_{sa}=\mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} + 1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!}.$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(l_s+j_{sa}-k)} \sum_{n_i=n}^{n_{is}=n+l_s-j_s+1} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_s} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - I)! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D - j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& ((D \geq n < l_s \leq D - n + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee \\
& (D \geq n < l_s \leq D - n + 1 \wedge \\
& 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
& j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\
& D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee
\end{aligned}$$



$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$fz^S_{j_s, j_{sa}} = \sum_{k=1}^{j_s-1} \sum_{j_s=2}^{j_s-1} \sum_{j^{sa}=\mathbf{l}_{sa}+n-D}^{j_s-1} \sum_{n_i=n}^{n_i-j_s} \sum_{n_s=n-j_s+1}^{n_{is}+j_s-j^{sa}} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{l_{sa}-k+1}$$



$$\begin{aligned}
& \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - n_{sa} - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - n - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^n \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l^{l+1}} \\
& \sum_{n_i=n}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - j_{sa}^{sa} - j_{sa}^{sa} - 1)! \cdot (l_s - 2)!}{(l_s - j_s - j_{sa}^{sa} - 1)! \cdot (l_s - 2)!}.$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_i + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s - l_{sa} - j_{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{(l_s - j_s + 1)} \sum_{j_s=1}^{(l_s - j_s + 1)} \frac{(l_s - j_s + 1)!}{(j_s - 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \sum_{n_i=\mathbf{n}+j_s+1}^n \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{(n_i - j_s + 1)} \frac{(n_i - j_s + 1)!}{(n_i - n_{sa} - j_s + 1)! \cdot (n_i - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - j_{sa} - \mathbf{n} + 1)! \cdot (\mathbf{n} - j^{sa})!}{(n_{sa} + j_{sa} - \mathbf{n} + 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{(l_s - j_s + 1)} \sum_{j_s=l_i+\mathbf{n}-D-s+1}^{(l_s - k + 1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(l_s - k + 1)} \\
& \sum_{n_i=\mathbf{n}+j_s+1}^n \sum_{n_{is}=\mathbf{n}+j_s-j_s+1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-j_s}^{(n_i - j_s + 1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_s^{DOSD} = & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=l_{sa}+n-D}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{is}-1)!} \\ & \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(j_s + j^{sa} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(D + l_{sa} - j_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{n_{is}+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_{sa}^{DOSD} = & \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \\ & \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}-k}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(D + l_s + j_{sa} - n - l_{sa} - s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_s^{DO} j_{sa}^{SD} &= \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \\ &\sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} j_{sa}^{DOSD} &= \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \\ &\sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_s}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_s - l_{sa} - s)!}{(D + j_s - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left. \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right) \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\},$$

$$s \geq 3 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z \geq 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \right. \\ \left. \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \right. \\ \left. \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \right).$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_s+j_{sa}-k}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{j_s=n-D}^{(l_s-j_s+1)} \sum_{j^{sa}=l_{sa}+1}^{l_{sa}+j_s+1} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+j_s-j^{sa}-k} j^{sa+1} \cdot \\
& \frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j^{sa}-j_{sa}+1}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-l_i)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbf{n} - \mathbb{k} > \mathbf{n} \wedge$$

$$j_{sa}^s \neq j_{sa}^{lk} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}^{lk}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$



$$\begin{aligned}
& \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_s-k+1)} j^{sa} = j_s + j_{sa} - 1 \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
& \left( \sum_{k=1}^{(D + j_{sa} - n - l_{sa})} \sum_{(j_s=l_s+n-D)}^{(l_s - n - D - j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \left. \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \right. \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j^{sa} - j_s - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D}^{D-n+1} \sum_{(j_s=l_{sa}+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s-1}}^{(n_{is}+j_{sa}^{s-1}-1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{is}+j_{sa}^{s-1}-1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n_{is} + j_{sa}^{s-1} - j_s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{s-1} = l_s \wedge l_{is} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I - j_{sa}^s \geq 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^s = j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^{s-1}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - 1)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s - j^{sa} - j_{sa} - l_i - l_{sa} - D - s)}^{( )} \sum_{l_{sa}-k+1}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+1}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{n} > D + l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - j^{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s+1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa})}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_s+l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=1}^{D+l_s+n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l-j_{sa}^s)!}{(n_i-n-l)! \cdot (n+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$



$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{i,j^{sa}}^{DOS} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{l_i=j^{sa}-j_s+1}^{j^{sa}-k} \sum_{j^{sa}=l_s+\mathbf{n}+j_{sa}-D-1}^{j^{sa}-k} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i-\mathbb{k})}^{(n_i-j_s)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa}^{lk} - s > l_s \wedge$$

$$D \geq \mathbf{n} < \mathbf{n} \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{\mathbf{s}}^{DOSD, j^{sa}} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s}^{(n_{is}-j_s+1)} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}-\mathbb{k})}^{(n_{is}-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - \mathbf{n} - \mathbf{l} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbf{l})! \cdot (j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(\mathbf{l}_s - \mathbf{n})!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_s - \mathbf{l}_i)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_i - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + \mathbf{l}_i \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s$$

$$\mathbf{l}_{ik} - j_{sa} + \mathbf{l}_i = \mathbf{l}_s \wedge \mathbf{l}_{ik} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_i \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_i - \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_s^{ik} - 1 \wedge j_{sa}^s = j_s - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_s^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq \mathbf{s} \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(\mathbf{l}_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j_s - 1)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{l_{ik}=0}^{(l_{ik}-k-j_{sa}^{sa})} \sum_{n_{ik}=n+l_{ik}}^{(n_{ik}-j_s+1)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{(n_{is}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{lk}-j_{sa}-l_{ik}}^{(n_{sa}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{lk}-j_{sa}-l_{ik}}^{(n_{sa}-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - j_s - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_i \geq D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\ & \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\ & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\ & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \frac{(D+j_s-l_{sa}-s)!}{(D+j^{sa}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} \cdot \\ & \sum_{k=1}^{D+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\ & \frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \\ & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \frac{(D-l_i)!}{(D+j^{sa}+s-\mathbf{n}-l_i-j_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$







$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - j^{sa} + 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s - k + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - k + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - s - l_s - j_s - j^{sa})! \cdot (\mathbf{n} + j_s - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-l_{sa}} \sum_{(j_s+j_{sa}-j^{sa}+l_s-l_{sa}=l_i+l_s+j_{sa}-D-s)} \sum_{l_{ik}=j_{sa}-l_s-l_{sa}+1}^{j_{sa}-l_s-l_{sa}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+j_{sa}-k-s+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i-j_s+1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}-l_s-j_{sa}+1)!}{(j^{sa}-l_{sa}-j^{sa}-l_s)! \cdot (j^{sa}-j_s-j_{sa}+1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s++1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \frac{(l_{ik}-k-j_{sa}+1)!}{(j_s+l_i+\mathbf{n}-j_{sa}-k+1)! \cdot (j^{sa}=j_s+j_{sa}-k+1)!}.$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \frac{(n_i-j_s+1)!}{(n_i-j_s+1)!}.$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{n_{ik}=n_{is}+j_{sa}^{ik}} \frac{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})!}{(n_{ik}-j_{sa}^{ik}+1)!}.$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$((D - \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(\mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \bigg) \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik})}^{(j_{sa}-j_{sa}+1)} \sum_{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$







$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \bigg) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-l_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_s)} \sum_{j_{sa}=l_{sa}-k+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_i - n_{sa} - 1)!}{(j_{sa} - n_{is} - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{i=0}^{(l_{ik}-k-j_{sa}^{sa})} \sum_{j_{sa}=1}^{(n_{is}+l_i+\mathbf{n}-D-j^{sa}-j_{sa}^{sa})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{\substack{(\cdot) \\ n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik} \\ (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}}$$

$$\frac{(n_{is} + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{n} \geq D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - s \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_{sa} + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\ \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+1}^n \sum_{n_i=n+1}^{(j_s+1)}$$

$$\sum_{n_{ik}=j_s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n+l_s-j_{sa}^{ik}-j_{sa}-l_k)}^{( )}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + j_s - j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s \cdot j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{K}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s \leq s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{\mathbf{n}+1} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(l_s-1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-k+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{is})}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(\cdot)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{sa}-j_{sa}^{is})!}{(n_i-n-l)! \cdot (n+j_s+j_{sa}-j^{sa}-s-l_{sa}-j_{sa}^{is})!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_{sa}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$







$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D-s+1)}^{(l_i+n-D-s)} \sum_{(j_{sa}=l_s+n-D-s+1)}^{(l_i+j_s-k-s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-l_{sa}-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-l_{sa}-j_s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}+j_{sa}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_s}^{(n_{is}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(n_{is}-j_s+1)}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l - j_{sa})!}{(n_i - l - l - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D - j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l_s \geq 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3, \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{i=l_s+1}^{(l_s-k+1)} \sum_{j_{sa}=l_i+1}^{(l_{sa}-k+1)} \sum_{n_{is}=n+l_k}^{(n_{is}+j_s-j_s+1)} \sum_{n_{sa}=n-j_s+1}^{(n_{is}+j_s-j^{sa}-l_k)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+l_k}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+l_k-j_s+1)}^{(n_i-j_s+1)}
\end{aligned}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: Z = 1 \Rightarrow$$

$$S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{\mathbf{n}+1} \sum_{\substack{l_s = \mathbf{l}_s + \mathbf{n} - j_s \\ l_{sa} = \mathbf{l}_{sa} + \mathbf{n} - D - j_{sa}}}^{(\mathbf{l}_{sa} - D - j_{sa})} \sum_{j_{sa} = \mathbf{l}_{sa} + \mathbf{n} - D}^{\mathbf{l}_{sa} - k + 1} \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{\substack{n_{is} = \mathbf{n} + \mathbb{K} - j_s + 1 \\ n_{sa} = \mathbf{n} - j_{sa} + 1}}^{j_s + 1} \sum_{n_{is} + j_s - j_{sa} - \mathbb{K}}^{n_{is} + j_s - j_{sa} - 1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{D-\mathbf{n}+1} \sum_{j_s = \mathbf{l}_{sa} + \mathbf{n} - D - j_{sa} + 1}^{(\mathbf{l}_s - k + 1)} \sum_{j_{sa} = j_s + j_{sa} - 1}^{\mathbf{l}_{sa} - k + 1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (j^{sa} - j_s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} - 1)!}{(l_s + l_{sa} - j^{sa} - j_s)! \cdot (j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=0}^{l_s+l_s+s-\mathbf{n}-l_i} \sum_{(i=\mathbf{n}-D-s+1)}^{-(k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=\mathbf{n}-D-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \cdots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-\mathbb{k}+1)}^{(\quad)} \frac{\mathbf{l}_{ik}+j_{sa}-j_{sa}^{ik}+1}{j_{sa}^{ik}+1} \right. \\ \sum_{i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{sa}=\mathbf{n}-j_s+1)}^{(n_{is}+j_s-j_{sa}-\mathbb{k})} \sum_{j_{sa}^{sa}+1}^{j_{sa}^{sa}+1} \frac{(n_i-n_{is}-1)!}{(j_{sa}^{sa}-2)! \cdot (n_i-n_{is}-j_{sa}^{sa}+1)!} \cdot \\ \frac{(n_i-n_{sa}-1)!}{(j_{sa}^{sa}-i_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa}^{sa})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa}^{sa})!} \cdot \\ \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ \left. \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}^{sa}-s)!} + \right. \\ \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{sa}^{sa}=j_{sa}}^{j_{sa}^{sa}} \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j_{sa}^{sa}+1)}^{(n_i-j_{sa}^{sa}-\mathbb{k}+1)} \frac{(n_i-n_{sa}-1)!}{(j_{sa}^{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}^{sa}+1)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa}^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - k - 1)!}{(l_{sa} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(D + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s - 1)!}{(n_i - n_{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^n \sum_{l_i=1}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{( )}^{( )} \sum_{n_{sa}=n_{ik}-j_{sa}-l_k}^{n_{ik}-j_{sa}+1} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_k - j_{sa})!}{(n_i - n - l_k)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + s - j_s - l_i)! \cdot (n - j_{sa})!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = l_k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa} - 1,$$

$$s: \{j_{sa}^s, l_k, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = l_k + l_k \wedge$$

$$l_k: l_k = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(n_{is}-j_s+1)} \sum_{j_{sa}=j_s}^{n_{sa}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} + \\
& \left( \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}+1)}^{(n_i-j^{sa}-l_k)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - l_s + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - l_s - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(n_i - l_s - j^{sa} - l_s + 1)!}{(n_i - j^{sa} - l_s + 1)! \cdot (n - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(n_i-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{i l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{(\quad)}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{\binom{(\quad)}{(j_s=j^{sa}-j_{sa}+1)}} \sum_{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{(\quad)}{(n_i-j_s+1)}} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_s}^{l_{ik}+j_s-k-j_{sa}^{ik}+1} \frac{(n_{sa}-n-D)}{n_{sa}-n-D} \right. \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_{is}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{\mathbf{l}-1} \sum_{j_s=\mathbf{l}_s}^{(\mathbf{l}_{ik}-k-1)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{(\mathbf{l}_{sa}-k-1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \sum_{j^{sa}+1}^{n_{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=\mathbf{l}}^{(\quad)} \sum_{j_s=1}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_{sa}-\mathbf{l}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!}.$$



$$\mathbb{K}_Z: Z = 1 \Rightarrow$$



$$fz S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right.$$

$$\sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{j^{sa}=j_s+j_{sa}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D+l_s+j_{sa}-n-l_{sa}-s)!}{(D+l_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \Bigg) +$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right.$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{j_s=l_i}^{( )} \sum_{j^{sa}=\mathbf{n}-D}^{n-l_i+1} \\
& \sum_{n_i=\mathbf{n}+l_i}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s - 1)!}{(j_s - j_{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_j^{l_{sa}} S_{sa}^D &= \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\ &\quad \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\quad \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + n_{sa} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-l_k+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_{sa})!}{(n_i-\mathbf{n}-l)! \cdot (\mathbf{n}+j_s-j_{sa}-j^{sa}-j_{sa}^s)!}.$$

$$\frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+l_s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! (\mathbf{n}+j_{sa}-j^{sa}-s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1$$

$$D > \mathbf{n} < n, \mathbf{n} = \mathbb{k} \geq 1$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa} - 1$$

$$\mathbf{s}: \{j_{sa}^s, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{n} - \mathbb{k} \wedge$$

$$\mathbb{k}_2 = \mathbf{n} - \mathbf{s} \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right.$$

$$\sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{j_s=\mathbf{l}_s}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j_s=\mathbf{l}_s}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right) \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(j_s + j^{sa} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=2}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{l_s=1}^{l_{ik}+j_{sa}-i} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-i-l_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_{sa}+1}^{(n_i-j_{sa}-l_k)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - l_s + 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - n - l_s)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - j_{sa} - l_s + 1)!}{(l_s - j_{sa} - l_s + 1)! \cdot (j_s - j_{sa})!} \cdot$$

$$\left( \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+l_{sa}-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(j_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$\mathbf{l}_{sa} \leq D + j_{sa} - \mathbf{n} \wedge \mathbf{l}_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^1, j_{sa}^2, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = 1 + \mathbb{K} \wedge$$

$\Rightarrow$

$$fzS_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_{sa}+1} \mathbf{l}_s + j_{sa} - k$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l_s-k+1} \sum_{(j_s=2)}^{l_s-k+1} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=0}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}^{l_{sa}-\mathbf{l}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa})}^{(n_i-j^{sa}-\mathbb{K}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(l_{sa} - j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} + s - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{j_s-1} \sum_{j_s=j^{sa}-j_{sa}+1} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=0}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j^{sa} = j_s + j_{sa} - 1}^{l_{sa} - k + 1} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} - j_s + 1)}^{(n_i - j_s - 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{is} + j_s - j^{sa} - \mathbb{k}} \\ & \frac{(n_i - j_s - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_s - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j^{sa} - l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{l_{sa} - i^{l+1}} \sum_{j^{sa}=j_{sa}}^{l_{sa} - i^{l+1}} \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{k} + 1)} \\ & \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n+j_s+1)}$$

$$\sum_{n_i=n+l}^n \sum_{n_{ik}=n+l}^{(n+j_s+1)}$$

$$\sum_{n_{ik}=n+l}^{(n+j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k}^{(n+j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{(n+j_s+1)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n+l)}^{(n+j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k}^{(n+j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^{i_1}, j_{sa}^{i_2}, \dots, j_{sa}^{i_s}\},$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: \mathbf{n} \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} + \\
& \sum_{i=n+l_k}^n \sum_{j_s=2}^{(j_s)} \sum_{j^{sa}=j_{sa}}^{(j_s)} \frac{(n_i - j^{sa} - l_k + 1)!}{(n_{sa} - n - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \right) + \\
& \left( \sum_{k=1}^{l-1} \sum_{j_s=2}^{(j_s)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-k} \right) \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s-k+1}^{l_s-k+1} \frac{(n_i - j_s + 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(l_{sa}-i^{l+1})} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \frac{(n_i - j^{sa} - k + 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}+1)}^{(n_i+j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K}}^{(n_i+j_s+1)}$$

$$\sum_{n_{ik}=n_i+j_{sa}-j^{sa}+1}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K}}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa})!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{K} - j_{sa}^s)!}{(n_i - n - \mathbb{K})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^{i_1}, j_{sa}^{i_2}, \dots, j_{sa}^{i_s}\},$$

$$s \geq 3 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: \mathbf{n} \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - s)!} + \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s}^{(n_i-j_s-1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(l_{sa}-i^{l+1})} \sum_{j^{sa}=j_s+1}^{j_{sa}+1} \\
& \sum_{n_i=\mathbf{n}+l_k}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(n_i - j_s - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}} \\
& \sum_{n_i=\mathbf{n}+l_k}^n \sum_{(n_{is}=\mathbf{n}+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(l_{sa}-i^{l+1})} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^n \sum_{l_i=1}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{( )}^{( )} \sum_{n_{sa}=n_{ik}-j_{sa}-l_k}^{n_{ik}-j_{sa}-l_k} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_k - j_{sa})!}{(n_i - n - l_k)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa}$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$



$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} \text{DQSD} = & \left( \sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{j_s=2}^{\mathbf{l}_s+j_{sa}-k} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-k} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{j_s+1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \right. \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\ & \left( \sum_{k=1}^{D+\mathbf{l}_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{\mathbf{l}_s+j_{sa}-k} \right) \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=1}^{D+l_s+j_{sa}-\mathbf{n}-l_s} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{l_s+j_{sa}-k}^{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^{s})!} \cdot \\
& \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_s-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_s - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_s) \vee$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_s - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$



$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{D+l_s-\mathbf{n}-l_{sa}} S_{j_s, j_{sa}}^{DOS} \\ & \sum_{j_s=\mathbf{n}-D-j_{sa}+1}^{(l_s-\mathbf{n}+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(l_s-\mathbf{n}+1)} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-\mathbf{l}_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=\mathbf{l}_{sa}+\mathbf{n}-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_i-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{sa} \leq D + l_{ik} + j_{sa}^{ik} - n - j_{sa}^{ik} \wedge$$

$$D + j_{sa} - n - l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D-j_s-k+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{(i=1)}^{( )} j^{sa} = l_i + \mathbf{n} - D \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_i - j_s + 1)} \\
& \frac{(n_i - j_s - 1)!}{(n_{sa} - j_s - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_s - \mathbf{n} - l_{sa}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{( )} j^{sa} = l_i + \mathbf{n} + j_{sa} - D - s \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{( )} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$f_{z=1}^{POSD} = \sum_{k=0}^{l_i} \sum_{j_s=j^{sa}-j_{sa}+1}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - 1)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-\mathbf{n}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{(\quad)+1}$$

$$\sum_{(n_{is}=\mathbf{n}+j_s+1)}^{(n_{is}=\mathbf{n}+j_s+1)}$$

$$\sum_{n_{is}=\mathbf{n}+\mathbb{k}}^{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s}^{(\quad)} \sum_{j_{sa}^{ik}}^{(\quad)} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=\mathbf{l}}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + s - \mathbf{n} - \mathbf{l}_i)! \cdot (\mathbf{n} - s)!}$$



$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=0}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=0}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(D+l_s+s-\mathbf{n}-l_i)} \sum_{(j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s)}^{(D+l_s+s-\mathbf{n}-l_i)}$$

$$\sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_s^s-j_{sa}^{ik})}^{(n_{ik}=n_{is}+j_s^s-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - l - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i-n_{sa}-1)!}{(j_s-2)! \cdot (n_i-n_{sa}+1)!} \cdot \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{is}+j_{sa}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}^{(\quad)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \frac{(n_i-n_{sa}-1)!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j^{sa}+1)!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} - \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} - 1)! \cdot (l_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=\mathbb{k}}^{\mathbf{l}} \sum_{(j_s=1)}^{\mathbf{l}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^{\mathbf{l}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}+j_{sa}-j_{sa}^{ik}-\mathbb{k}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$(D \geq \mathbf{n} < n \wedge l_i \leq D - \mathbf{n} - 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - \mathbb{k} \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - \mathbb{k} + 1 = l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} - l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$l_{sa} \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$



$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} + 1)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-s)}^{(\quad)}$$

$$\frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!}.$$

$$\frac{(l_s-k-j_s+1)!}{(l_s-j_s-j_{sa}-1)! \cdot (l_s-2)!}.$$

$$\frac{(D-l_i)}{(D+j^{sa}+s-\mathbf{n}-I-j_{sa})! \cdot (n_i-j_{sa}-j^{sa}-s)!}.$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} - l_i + j_{sa} - j_{sa} = -sa \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = 0 \geq 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$$

$$s \geq 3, \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot$$

$$\sum_{i=1}^{( )} \sum_{j_s=1}^{( )} j^{sa}$$

$$\sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{n_i-j^{sa}-1} j^{sa}+1$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1} (l_{sa}-k-j_{sa}+2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{(n_i-j_s+1)} j^{sa}+1$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i l} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s + j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_s - j_{sa}^{ik})!}.$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} = l_{ik} \wedge l_{ik} + j_{sa} - s > 0 \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}, j_{sa}^{ik}, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \mathbb{k} \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot$$

$$\sum_{i=1}^{l-1} \sum_{j_s=1}^{(j_s)} j^{sa}$$

$$\sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{n_i-j^{sa}-1} j^{sa}+1$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j^{sa}}$$

$$\sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{n_i-j_s+1} (n_i-j_s+1)$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-1)}^{(j_s)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{\binom{()}{i}} \sum_{(j_s=1)}^{()}{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{i}}^{()}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()}{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s + j_{sa}^{ik})!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \geq l_{ik} \wedge l_{sa} + j_{sa} - s = \mathbb{k} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + j_{sa} - \mathbf{n} + j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}, j_{sa}^{ik}, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \mathbb{k} \Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa}=l_i + \mathbf{n} + j_{sa} - D - s}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$



$$\begin{aligned}
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \frac{(l_{ik} - k - j_{sa}^{ik} + 2)!}{(l_{ik} - k - j_{sa}^{ik} + 2)! \cdot (j_s - l_{ik} - j_{sa}^{ik} + 2)!} \cdot \sum_{n_i=n+l_k}^{n+l_k-1} \sum_{n_{sa}=n+l_k-j_s+1}^{n+l_k-j_s+1} \sum_{n_{sa}=n-j^{sa}+1}^{n-j^{sa}+1} \frac{(n_i - n_{is} - 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^l \sum_{j_s=1}^{l_s} \frac{l_i + j_{sa} - l_i^{l-s+1}}{j^{sa} = l_i + n + j_{sa} - D - s} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i - j^{sa} - k + 1)}
\end{aligned}$$



$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - l_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+\mathbf{n}+j_{sa}-l_{sa})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}, \dots, n_{is}=\mathbf{n}+\mathbb{k})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik})}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}, \dots, n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}$$

$$\frac{(n_i + j_{sa}^{ik} - j_{sa}^{ik} + j_{sa}^{ik} - s - I - j_{sa}^s)!}{(n_i - j_{sa}^{ik} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^i - j_{sa} + 1$$

$$j_s + j_{sa}^i - 1 \leq j_{sa}^i + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_{ik} + j_{sa}^{ik} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{j^{sa} - \mathbf{n} - l_{sa}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{( )} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \frac{(n_i - j_s - 2)!}{(n_i - n_{sa} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{j_{sa} - \mathbf{n} - l_{sa}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{( )} \sum_{j^{sa} = l_{sa} + \mathbf{n} - D}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{( )} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j}^{D-s} &= \sum_{k=1}^{l-1} \frac{(l_i - k - D - s)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-i^{l-s+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})} \sum_{j_s=1}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{sa}-j_{sa})!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-s-l_{sa}-j_{sa})!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-s-l)!}{(D+j^{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{j^{sa}-j_s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(j_s + j^{sa} - \mathbf{n} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} l_{sa-k+1} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_i} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=j_{sa}}^{(n_i-j^{sa}-l_{sa})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_i-j^{sa}-l_{sa})} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - l_{sa})! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - i^{l-1})!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j_s - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(l_{sa}-j_{sa}-i^{l-1})} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-l_k)} \sum_{(j_s=1)}^{(l_{sa}-j_{sa}-i^{l-1})} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_i} \sum_{(j_s=1)}^{(l_{sa}-i^{l+1})} \sum_{j^{sa}=j_{sa}}^{(n_i-j^{sa}-l_{sa})}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} \leq l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} \leq l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} - 1 \wedge$$

$$j_s \leq j_{sa}^i - 1, j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{0, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$\geq 3 \wedge l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{j_s=2}^{l_{sa}-i^{l_s}} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l_s}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-l_k+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j_s - k)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\sum_{k=i}^{(\cdot)} \sum_{j_s=1}^{(\cdot)} \sum_{j_{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{K}}^n (n_{ik}=\mathbf{n}_i+j_{sa}-j_{sa}^{ik}+1) n_{js}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{K} - j_{sa}^s)!}{(n_i - \mathbf{n} - I - \mathbb{K})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
 \end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{(i=1)}^{n-i} \sum_{j^{sa}=\mathbf{n}-D}^{n-i-1} \sum_{n_i=\mathbf{n}+l_{sa}-j_s+1}^{n-i-1} \sum_{n_{is}=\mathbf{n}+l_{sa}-j_s+1}^{n-i-1} \\
& \frac{(n_i - j_s - j_{sa} - 2)!}{(n_i - n_{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{( )} \\
& \sum_{n_i=\mathbf{n}+l_{sa}-j_s+1}^n \sum_{n_{is}=\mathbf{n}+l_{sa}-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_{sa})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & S_{l_s, j_{sa}}^{DOSL} \sum_{i=1}^{l-1} \sum_{(j)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_s + j_{sa} - k + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{K} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} - \mathbb{K}}^{n_{is} + j_s - j^{sa} - \mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa} = l_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{l_{ik} + j_{sa} - i^l - j_{sa}^{ik} + 1} \\
& \sum_{n_i = \mathbf{n} + \mathbb{K}}^n \sum_{(n_{sa} = \mathbf{n} - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{K} + 1)} \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j_{sa}^{ik}-l-j_{sa}^{ik})!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j_{sa}^{ik}-j_{sa}^{ik})!} \cdot \\
& \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l)!}{(D+j_{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \wedge D + l_s + j_{sa}^{ik} - n - 1$$

$$D + n < n \wedge n = \mathbb{k} \geq 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa} - 1$$

$$s; \{j_{sa}^s, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_{j_{sa}} = j_{sa} - s$$

$$\begin{aligned}
f_Z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{is}+j_s-j_{sa}^{ik}-\mathbb{k}}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_s} \sum_{(j_s=l_{ik}-D-j_{sa}^{ik}+1)}^{(l_s-1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}^{ik}+1} \\
& \sum_{n_{is}=n+l_k-j_s+1}^n \sum_{n_{sa}=n+l_k-j_s+1}^{n_{is}+j_s-j^{sa}-l_k} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{(j_s=1)}^{(l_s-1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}
\end{aligned}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik})}^{(l-k+1)} \sum_{(j_{sa}=n_{ik}+j_{sa}^s-j_{sa}^{ik})}^{(D-j_{sa}^{ik}+1)} \sum_{j_{sa}=1}^{j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(D + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(D + j^{sa} - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_s) \leq n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < \mathbf{l}_{sa} \leq D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s}^{DO} &= \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_s+j_{sa}-k} \\ &\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{is} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(n - k - 1)!}{(n - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-i^{l-s}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$



$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_s+1)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(i-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_s)!}{(D+j^{sa}+s-n-l_s-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j_{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{j_{sa} = l_s + j_{sa} - k} \sum_{(j_s=2)}^{j_{sa} = l_s + j_{sa} - k} \frac{(j_{sa} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa} = l_s + j_{sa} - k + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_{sa} - l_s + 1} \sum_{i=1}^{j^{sa} - l_{sa} + k} j^{sa} = l_{sa} + n - j^{sa} - k + 1 \\
& \sum_{i=n+k}^n (n_{sa} - n - j^{sa} + 1) \\
& \frac{(n_i - n_{sa} - 1)!}{(j^{sa} - n_{sa} - 1)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 1 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa}^l - 1 \wedge$$

$$s: \{j_{sa}^l, j_{sa}^{l-1}, \dots, j_{sa}^1\} \wedge$$

$$s \geq 3 \wedge s \leq j_{sa}^l + \mathbb{K} \wedge$$

$$\mathbb{K}_{Z,1} = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l-1} \sum_{(j^{sa}=\mathbf{n}-D-s+1)}^{-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \sum_{j_s=1}^{( )} l_i + j_{sa} - i^{l-s+1} j^{sa} = l_i + n + j_{sa} - D - s$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{sa}=n-j^{sa})}^{(n_i-j^{sa}-\mathbb{K}+1)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{j_s=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s-n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-D-s+1)}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \leq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}}^{DOSD} = & \binom{D+l_s+j_{sa}-n-l_{sa}}{k} \sum_{j_s=l_{ik}+j_{sa}-j_{sa}^{ik}+1}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{(j_{sa}-j_{sa}^{ik}+1)} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{is}+j_s-j_{sa}-\mathbb{k})} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{sa} - \mathbb{k} - 1)!}{(j_{sa}^{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left( \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\ & \binom{D+l_s+j_{sa}-n-l_{sa}}{k=1} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{(j_{sa}-j_{sa}^{ik})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \end{aligned}$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}-k+1}^{l_{sa}-k+1} \frac{(n_i - n_{is} - 1)!}{(j_s - l_{ik} + \mathbf{n} - D - j_{sa}^{ik} + 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_{is}-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - l_{ik} + \mathbf{n} - D - j_{sa}^{ik} + 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - \mathbf{n} - l_i - j_s - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s-j^{sa}-j_{sa}+1) \leq l_{ik} \leq l_s} \sum_{a=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )} \cdot \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s - j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}}^{DOSD} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{l_{sa}+n-D-j_{sa}} \sum_{j_{sa}=l_{sa}+n-D-j_{sa}+1}^{l_{sa}-k+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\ & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{(l_{sa}+n-D-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \left. \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \right) \end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j_s=l_{ik}+\mathbf{n}-j_{sa}+1}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!} \cdot$$

$$\sum_{i=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{j_s=0}^{(l_{ik}-k-j_{sa}^{ik})} \sum_{j_{sa}=0}^{(n_{is}+j_s-1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{n} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{is} + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{n} - D \geq \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq \mathbf{n} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right. \\
 & \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i=j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \left. \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \right)
 \end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot
\end{aligned}$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(j_s + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!}.$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-1)}^{( )} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-1)}^{(\mathbf{l}_s+j_{sa}-1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_i=j_s+1, \dots, n_i=j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$\mathbf{l}_s \leq j_s \leq j_s^i - j_{sa} \wedge$$

$$j_s + j_{sa}^i \leq j^{sa} \leq j_s + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + j_{sa}^i > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$j_s > \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$



$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} j^{sa} = j_s + j_{sa} - \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \right)$$



$$\begin{aligned}
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_{sa}-1}^{j^{sa}=j_s-1} \\
& \sum_{n_i=n}^n \sum_{n_{is}=n+l_k-j_s+1}^{n_{is}=n+l_k-j_s+1} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D - j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$\begin{aligned}
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge \\
& j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge \\
& j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge \\
& l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\
& (D \geq n < n \wedge l_s > D - n + 1 \wedge \\
& 2 \leq j_s \leq j^{sa} - j_{sa} \wedge
\end{aligned}$$



$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \bigg) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{j_s=j_{sa}-j_{sa}}^{l_s} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_s-k} \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(l_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j_{sa}-j_{sa})} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-k} \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \right)$$



$$\frac{(n_{is} - n_{sa} - k - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - k)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{i=l_s+1}^{l_s-k+1} \sum_{j_{sa}=l_{sa}-k+1}^{l_{sa}-k+1} \sum_{n_i=n+k}^{n} \sum_{n_{is}=n+k-j_s+1}^{n_{is}+j_s-j^{sa}-k} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - k - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - k)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{j_s=l_s+n-D}^{l_s-k+1} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-k}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - \mathbf{n} - l_s - 1)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s+j_{sa}-j^{sa}+l_{sa}-l_i+l_s=j_s+l_{sa}-j^{sa}+l_s)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq \mathbf{n} < n) \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$l_s - j_s - j_{sa} - j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$



$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\},$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{\mathbf{s}}^{SD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}}$$

$$\sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) +$$

$$\left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right.$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} + l_{sa} - j_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\begin{aligned}
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-k}^{l_{sa}-k+1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s}^{(n_i-j_s-j^{sa}-k)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - k - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i + j_s - n_{sa} - k - 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_{sa} - j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k)}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$\sum_{j_s=j^{sa}-j_{sa}+1}^{D-\mathbf{n}+1} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{K}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - j_{sa}^s)!}{(l_s - j_s - \mathbb{k} - 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!}.$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge \mathbf{n} + j_{sa} - s > 0 \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \mathbf{n} + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!}.$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \frac{(j_{sa}=l_i+\mathbf{n}+j_{sa}-D-s)}{n_{i=1}^{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}}$$

$$\sum_{n_i=\mathbf{n}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + \mathbf{n} - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{n} > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_s - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > \mathbf{n} - \mathbf{n} \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-l_k} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - l_k - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - l_k)!} \cdot \\
& \frac{(n_{sa} - n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - j_{sa} - l_s - s)!}{(n + j^{sa} - n - l_s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{i=1}^{D+l_s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=\mathbf{l}_{sa}+\mathbf{n}-j_{sa}+1)}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{j_{sa}^s=j_s-j_{sa}-1}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{j_{sa}^{sa}=j_{sa}+1}^{(n_{is}+j_s-j_{sa}-1)} \\ & \frac{(n_{is}-j_s-j_{sa}-1)!}{(j_{sa}^s-j_s-1)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-j_s-j_{sa}-\mathbb{k}-1)!}{(j_{sa}^s-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j_{sa}-\mathbb{k})!} \cdot \\ & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j_{sa})!} \cdot \frac{(\mathbf{l}_s-k-1)!}{(\mathbf{l}_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ & \frac{(D+j_{sa}-\mathbf{l}_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-\mathbf{l}_{sa})! \cdot (\mathbf{n}+j_{sa}-j_{sa}-s)!} - \\ & \sum_{k=1}^{D+\mathbf{l}_s+s-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{j_{sa}^s=j_s+j_{sa}-1}^{(\mathbf{l}_{sa}-k-j_{sa}+2)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!} \cdot \end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_{j_s, j_{sa}}^{s, D} = \sum_{k=1}^{n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-s-l-j_s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l)!}{(D+j^{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - l_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_s > 0 \wedge$$

$$j_s \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{1, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{1, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
\end{aligned}$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-l_{sa}-j_s+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=n_{sa}+j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s}^{(j_s)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}-j_{sa}+1)}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - j_s - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$l_s \leq j_s \leq j_{sa}^i - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa}^i - 1 + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D > \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-1}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - \mathbb{k})!}{(l_s - j_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{is} + j_{sa}^{ik} - j_{sa} > l_i \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I - j_{sa} > 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa} \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{S}: \{j_{sa}^s, \dots, l_{sa}^s, \dots, j_{sa}^i\} \quad \mathbf{S}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(l_{ik}-k-j_{sa}^{ik}+2)-s+1} \\
& \sum_{i=\mathbb{k}}^n \sum_{j_s=\mathbf{n}+\mathbb{k}-j_s+1}^{n_i-j_s+1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(l_{ik}-k-j_{sa}^{ik}+2)-s+1}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - j_{sa}^{ik} - j_{sa}^{sa})!}{(l_s - j_s - j_{sa}^{ik} - j_{sa}^{sa} - 1)! \cdot (l_s - j_{sa}^{ik} - j_{sa}^{sa} - 2)!} \cdot$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - \mathbf{n} - I - j_{sa})! \cdot (n_i - j_{sa} - j^{sa} - s - I - j_{sa}^s)!} \cdot$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s^{ik} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}^{ik} - 1, j_{sa}^{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 4 \wedge j_{sa} \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{j_s=\mathbf{n}-j^{sa}+1}^{D-\mathbf{n}} \sum_{(j_s=\mathbf{n}-j^{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^s)!} \cdot$$

$$\frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l)!}{(D+j^{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$(\{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}-\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s}^{(n_{is}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{is}-j_s+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - l_{sa} - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n_{is} - n - j_s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^s + 1 \geq l_s \wedge l_{ik} + j_{sa}^s - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = 0 > 0 \wedge$$

$$j_{sa} \leq j_s - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{sa}^s, \dots, j_{sa}^i\} \quad s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq n_{is} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: Z = 1 =$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{j_s=l_s+\mathbf{n}-k+1}^{l_s-k+1} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{j_{sa}^{ik}+1} \\
& \sum_{j_s=\mathbb{k}+1}^n \sum_{j_s=\mathbf{n}+\mathbb{k}-j_s+1}^{n_i-j_s+1} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}
\end{aligned}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k - 1)! \cdot (l_s - 2)!}.$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n - j_{sa} - j^{sa} - 1)!}.$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge n + j_{sa} - s = \quad \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = \quad + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!}.$$



$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{(j^{sa}=j_s+j_{sa}^{ik}+1)}^{(n_{is}+j_{sa}-j_s-j_{sa}^{ik}+1)}$$

$$\sum_{(n_i=\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{is}=\mathbb{k}+j_s-1)}^{(n_{is}+j_s-j^{sa}-\mathbb{k})} \sum_{(j^{sa}=1)}^{(j^{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{is} - \mathbb{k} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}.$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{(j^{sa}=j_s+j_{sa}^{ik}-1)}^{(n_{is}-j_s+1)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{( )} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa})) \wedge$$

$$D \geq n < n - \mathbb{k} > \mathbb{k} \wedge$$

$$j_{sa}^{s-1} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{s-1}, j_{sa}^i, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \leq 1 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-\mathbf{n}+1} \sum_{l_s=\mathbf{n}-D}^{j_s-k+1} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_{sa})!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_i-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \bigg) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_i+\mathbf{n}-D-s)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$



$$\begin{aligned} & (D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge \\ & 2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge \\ & \mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s > \mathbf{l}_{sa}) \vee \end{aligned}$$



$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \mathbb{K} \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^i, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K}$$

$$\mathbb{K}: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-k} \\ &\sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{(j^{sa}=l_s+l_{sa}-k+1)}^{(l_s-k+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+\mathbb{k})}^{(n-j_s+1)} \\
& \frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-1)! \cdot (j_s+1)!} \cdot \\
& \frac{(n_{sa}-1)!}{(j_s-1)! \cdot (n_{sa}+j_s-j^{sa}-\mathbb{k})!} \cdot \\
& \frac{(n_{sa}-1)!}{(n_{sa}+j_s-j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}
\end{aligned}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s - l_{sa})!}.$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D-j_{sa}+1)}^{(l_{sa}-j_{sa}-D-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_{sa}-\mathbb{K})} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_s - j^{sa} - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_s - 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_i - j_s - 1)! \cdot (\mathbf{n} + j_s - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_{sa}-n-l_i} \sum_{j_s=l_i+n-l_{sa}+1}^{l_s-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_s+l_{sa}-j^{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{i l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}} \right. \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}+1)}^{(n_i-j_s)} \sum_{(n_{sa}=n-j_{sa}+\mathbb{k})}^{(n_{is}+j_{sa}-j_{sa}-\mathbb{k})} \frac{(n_i-n_{sa}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}+1)!} \cdot \\ \frac{(n_{is}-n_{sa}+\mathbb{k}-1)!}{(j_{sa}-j_s-1)! \cdot (n_{is}+j_{sa}-n_{sa}-j_{sa}-\mathbb{k})!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\ \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \right. \\ \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{sa}=j_{sa}}^{(\quad)} \\ \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-j_{sa}-\mathbb{k}+1)} \\ \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j_{sa}-2)! \cdot (n_i-n_{sa}-j_{sa}-\mathbb{k}+1)!} \cdot \\ \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \\ \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n-s)!} \right) +$$



$$\begin{aligned}
& \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=j_{sa}+2}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right. \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_s - l_{sa} - s)!}{(l_s + j^{sa} - \mathbf{n} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{K}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{j_s=1}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+k}^n \sum_{n_{sa}=n+k-j^{sa}+1}^{(n_i-j^{sa}-k)} \\
& \frac{(n_i - n_{sa} - k - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - k - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left( \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{l-1} \sum_{j_s=j^{sa}-j_{sa}+1}^{( )} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-l_i)!}$$

$$D \geq \mathbf{n} < n \wedge l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_{sa}}^{Dl_{sa}} = \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - 1)!} \cdot$$

$$\frac{(n - j^{sa} - 1)!}{(n + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot$$

$$\frac{(D + j_{sa} - n - l_{sa})!}{(D + j_{sa} - n - l_{sa})! \cdot (n - j^{sa} - s)!} +$$

$$\left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-j_s+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right)$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \sum_{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$



$$\begin{aligned}
& \sum_{k=1}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{\mathbf{l}_{sa}-\mathbf{l}+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa})}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_i - j^{sa})!} \cdot \\
& \frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_s - j_s - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - \mathbf{l}_{sa})!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) - \\
& \sum_{k=1}^{\mathbf{l}_i} \sum_{(j_s=2)}^{(\mathbf{l}_{ik}-k-j_s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^i - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right)$$

$$\sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+j_s-k-j_{sa}^{ik}+1}^{l_{sa}-k+1} \right. \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \quad \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \quad \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \quad \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{ik}+j_s-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{l-1} \sum_{j_s=1}^{(l_{ik}-k-1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \frac{(n_i - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - k - 1)!}{(j^{sa} - j_s - k + 1)! \cdot (n_{sa} + j_s - n_{sa} - j^{sa} - k)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{( )} \sum_{j_s=1}^{( )} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-l+1} \frac{(n_i - j^{sa} - k + 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - k + 1)!} \cdot
\end{aligned}$$







$$\begin{aligned}
 f_z S_{j_s, j^{sa}}^{DOSD} = & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right. \\
 & \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa}-\mathbb{k})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D+l_s+j_{sa}-n-l_{sa}-s)!}{(D+l_s+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\
 & \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-j_s-1)! \cdot (n_{is}+j_s-n_{sa}-j^{sa}-\mathbb{k})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \left. \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \right)
 \end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(D + j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=l_{sa}+\mathbf{n}-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{( )} \sum_{i=1}^{n-l+1} \sum_{j^{sa}=n-D}^{n-l+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(j_s - 2)! \cdot (n - n_{sa} - j^{sa} - k + 1)!}{(n_{sa} - 1)!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_j^{l_{sa}} S_{sa}^D &= \left( \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \right. \\ &\quad \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\ &\quad \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\quad \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\quad \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j^{sa}-j_{sa})} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{l_s+j_{sa}-k}^{( )} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-l-j_s+1)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^{s})!} \cdot \\
& \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - 1 - 1$$

$$D \geq n < n, \mathbb{k} = \mathbb{k} > 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^k < j_{sa} - 1 \wedge j_{sa}^i \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = \dots, \mathbb{k} \wedge$$

$$\mathbb{k}_2 = \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \right)$$

$$\sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \left( \sum_{j_s=\mathbf{n}-j^{sa}+1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1} \sum_{j_s=\mathbf{n}-j^{sa}+1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \right) \cdot \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=2}^{(l_s-k+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D}{l}} \sum_{j^{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{ik}+j_{sa}-\mathbf{l}-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_s=\mathbf{n}+\mathbb{k}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(j^{sa} - \mathbf{l}_s - 1)!}{(j^{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\left( \frac{(D + j_{sa} - \mathbf{l}_{sa})!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+\mathbf{l}_{sa}-\mathbf{n}-\mathbf{l}_i} \sum_{(j_s=\mathbf{l}_i+\mathbf{n}-D-s+1)}^{\binom{D}{l}-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{\binom{D}{l}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbf{l} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbf{l})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$



$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > n \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = n + \mathbb{K} \wedge$$

$\Rightarrow$

$$fzS_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)} l_s + j_{sa} - k \sum_{j^{sa}=j_{sa}+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{(j_s=2)}^{i l_s - l_s - k + 1} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^n \sum_{i=1}^{( )} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{sa}=n-j_{sa})}^{(n_i-j_{sa}-\mathbb{K}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - 2)! \cdot (n_i - n_{sa} - j_{sa} - \mathbb{K} + 1)!} \cdot \\
& \frac{(n_i - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n_i - j_{sa})!} \cdot \\
& \frac{(l_{sa} - j_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - l_s + 1)! \cdot (j_{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\
& \sum_{k=1}^{j_{sa}-1} \sum_{j_s=j_{sa}-j_{sa}+1}^{l_s+j_{sa}-k} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{K})}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j_{sa}^s - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j_{sa}^s - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} - \\
& \sum_{k=1}^n \sum_{i=1}^{( )} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l+1}}
\end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\quad) \\ n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-l_i)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$



$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa}^{sa} = j_{sa} - 1}^{l_{sa} - k + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n - j_s + 1)}^{(n_i - j_s - 1)} \sum_{n_{sa} = n - j_{sa} - 1}^{(n_{is} + j_s - j_{sa} - \mathbb{k})}$$

$$\frac{(n_i - j_s - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j^{sa} - l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{l_{sa} - i^{l+1}} \sum_{j_{sa} = j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_i - j^{sa} - \mathbb{k} + 1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-\mathbb{k}}^{(n+j_s+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n+j_s+1)} \sum_{n_{ik}=\mathbf{n}+j_{sa}-j^{sa}-\mathbb{k}}^{(n+j_s+1)} \sum_{n_{sa}=\mathbf{n}+j_{sa}-j^{sa}-\mathbb{k}}^{(n+j_s+1)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbb{k})!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}^{(n+j_s+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{(n+j_s+1)} \sum_{(n_{ik}=\mathbf{n}+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n+j_s+1)} \sum_{n_{sa}=\mathbf{n}+j_{sa}-j^{sa}-\mathbb{k}}^{(n+j_s+1)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^i, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = n + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: \dots \Rightarrow$$

$$f_Z S_{j_s, j_{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{K}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - s)!} + \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{is} + j_s - j^{sa} - \mathbb{k})} \sum_{j_s = 2}^{(j_s)} \sum_{j^{sa} = j_{sa}}^{(j_s)} \sum_{l_s = j_s}^{(j_s)} \sum_{l_{sa} = j_{sa}}^{(j_s)} \sum_{k=1}^{l-1} \sum_{j_s=2}^{(j_s)} \sum_{j^{sa}=j_{sa}+2}^{l_s+j_{sa}-k} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \Bigg) + \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{is} + j_s - j^{sa} - \mathbb{k})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_s - k + 1} \frac{(l_s - k + 1)!}{(j_s - 1)! \cdot (n_i - n_{ls} - j_s + 1)!} \cdot \\
& \sum_{n_i=n-\mathbb{k}}^n \sum_{(n_{ls}=n+\mathbb{k}-j_s)}^{(n-j_s+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n-j^{sa}-\mathbb{k})} \frac{(n_{sa} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{ls} - j_s + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=1)}^{l_{sa} - i^{l+1}} \sum_{j^{sa}=j_{sa}+1}^{l_{sa} - i^{l+1}} \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$



$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}+1)}^{(n_i+j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - \mathbf{n} - l)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{n})!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s - j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = n + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \left( \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{K}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - \mathbf{n} - s)!} + \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{is} + j_s - j^{sa} - \mathbb{k})} \sum_{j_s = 2}^{(j_s)} \sum_{j^{sa} = j_s}^{(j_s)} \sum_{j_{sa} = j_s}^{(j_s)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} \right) + \\
& \left( \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \right) \\
& \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{(n_{is} + j_s - j^{sa} - \mathbb{k})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=1)}^{(l_{sa}-i^{l+1})} \sum_{j^{sa}=j_s+1}^{j_{sa}+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j_s+1}^{(n_i-j_s+1)} \\
& \frac{(j_s - 2)! \cdot (n - n_{sa} - j^{sa} - k + 1)!}{(n_{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Big) - \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(l_s-k+1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s + j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - \mathbf{n} - l_i)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - j_{sa}^{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa}$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$



$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1 \Rightarrow$$

$$PQSD = \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_s=2}^{l_s+j_{sa}-k} \sum_{j_{sa}=l_{sa}+n-D}^{j_{sa}-j_{sa}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{sa}-k} \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - k - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - k)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j_{sa}-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \right)$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=1}^{D+l_s+j_{sa}-\mathbf{n}-l_s} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - l_s - j_{sa} + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{l_s+j_{sa}-k}^{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^s)!}$$

$$\frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_s)!}{(D+j^{sa}+s-n-l_s-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_s - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_s) \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_s - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$



$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{D+l_s-n-l_{sa}} S_{j_s, j_{sa}}^{DOS} \\ & \sum_{j_s=j_{sa}+n-D-j_{sa}+1}^{(l_s-j_s+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \end{aligned}$$



$$\begin{aligned}
& \left( \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \right. \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+\mathbb{k}}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - j_s - k + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_{sa} + l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(n - j_s - k + 1)!}{(n - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_{sa}-i^{l+1}} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-i^{l+1}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_i-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{sa} \leq D + l_{ik} + j_{sa}^{ik} - n - j_{sa}^{ik} \wedge$$

$$(D + j_{sa} - n - l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$(D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$



$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$



$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 1 \Rightarrow$$

$$\begin{aligned} f_Z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j_{sa}=l_{sa}+n-D-j_s+1}^{l_{sa}-k+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + j_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l_s} \sum_{i=1}^{(j_s - k)} \sum_{j^{sa}=n+D}^{n-l_{sa}-i+1} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{sa}=n-j^{sa}+1}^{(n_i - j_s + 1)} \\
& \frac{(j_s - 2)! \cdot (n - n_{sa} - j^{sa} - k + 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(j_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_s - n - l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(j_s)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{(j_s)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_{z=1}^{POSD} = & \sum_{k=1}^{l_i} \sum_{j_s=j^{sa}-j_{sa}+1}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\ & \sum_{k=1}^{(\quad)} \sum_{j_s=1}^{(\quad)} \sum_{j^{sa}=j_{sa}} \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
& \sum_{k=1}^{i-l-1} \sum_{(j_s=j^{sa}-k+1)}^{(i)} \sum_{j_{sa}=j_{sa}+1}^{j_s+1} \\
& \sum_{n_{ik}=n_{is}+j_s^{sa}-j_{sa}^{ik}+1}^{j_s+1} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(i)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=l}^{(i)} \sum_{(j_s=1)}^{(i)} \sum_{j_{sa}=j_{sa}}^{(i)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(i)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(i)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$



$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DOSD} = \sum_{k=0}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{-(j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{k})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=0}^{( )} \sum_{(j_s=1)}^l \sum_{j_{sa}=j_{sa}}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}.$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_s^s-j_{sa}^{ik})}^{(n_i-j^{sa}-\mathbb{k}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - l_i - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - l_i - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 {}_{fz}S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
 & \frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_s-1)! \cdot (j_s-j^{sa}-\mathbb{k})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=i^l}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
 & \frac{(n_i-n_{sa}-\mathbb{k}-1)!}{(j^{sa}-2)! \cdot (n_i-n_{sa}-j^{sa}-\mathbb{k}+1)!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}-s)!} - \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}
 \end{aligned}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} - 1)! \cdot (l_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=\mathbb{k}}^l \sum_{(j_s=1)}^l \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k})! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$(D \geq \mathbf{n} < n \wedge l_i \leq D - \mathbf{n} - 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - \mathbb{k} \leq j^{sa} \leq \mathbf{n} - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} - l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$l_i \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$



$$\mathbb{k}_Z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
 & \frac{(n_i - n_{is} - \mathbb{k})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - \mathbb{k})!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}^{(\quad)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
 & \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} - \\
 & \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{sa}-k+1}
 \end{aligned}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-s)}^{(\quad)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-I-j_{sa}^s)!}{(n_i-\mathbf{n}-I)! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-j_{sa}^s-1)! \cdot (l_s-j_s-j_{sa}^s-2)!}{(l_s-j_s-j_{sa}^s-1)! \cdot (l_s-j_s-j_{sa}^s-2)!} \cdot \\
& \frac{(D-l_i)}{(D+j^{sa}+s-\mathbf{n}-I-j_{sa})! \cdot (n_i+j_{sa}-j^{sa}-s-j_{sa}^s)!}
\end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbf{n} - \mathbf{n} > 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4, \mathbf{n} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} &= \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - l_{sa} - s)!}.$$

$$\sum_{i=1}^{l_s} \sum_{j_s=1}^{(j_s)} j^{sa} - 1$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} j^{sa}+1$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}.$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!}.$$

$$\sum_{k=1}^{i^{l-1} (l_{sa}-k-j_{sa}+2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}.$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^{ik})!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^{ik} + j_{sa})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - j_s - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - s = l_{ik} \wedge l_{ik} - j_{sa} - s > 0 \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^l\} \wedge s \in \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}^i, \dots, j_{sa}^l\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \dots \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{i=1}^{l-1} \sum_{(j_s=1)}^{( )} j^{sa}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} j^{sa+1}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} - s)!} \cdot$$

$$\sum_{k=1}^{i l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{l_i} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{( )} \sum_{n_{sa}=n_{ik}-j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^{ik})!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s + j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - j_s - l_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s = (j_{sa}^s, \dots, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i) \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_Z: Z = \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l_i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l-1} \frac{(l_{ik} - k - j_{sa}^{ik} + 2)!}{(l_{ik} - k - j_{sa}^{ik} + 2)! \cdot (j_{sa}^{ik} - j_{sa}^{ik} + 2)!} \cdot \sum_{n_i=\mathbf{n}+\mathbb{k}}^{l_{ik}-k-j_{sa}^{ik}+2} \frac{(n_i - j_{sa}^{ik} + 1)!}{(n_i - j_{sa}^{ik} + 1)!} \cdot \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \frac{(n_{sa} - j^{sa} + 1)!}{(n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_i - n_{is} - 1)!}{(n_i - n_{is} - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l-1} \sum_{j_s=1}^{l_{ik}-k-j_{sa}^{ik}+2} \frac{(l_{ik} - k - j_{sa}^{ik} + 2)!}{(l_{ik} - k - j_{sa}^{ik} + 2)! \cdot (j_{sa}^{ik} - j_{sa}^{ik} + 2)!} \cdot \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-l_{ik}+1} \frac{(j^{sa} - j_s - j_{sa} + 1)!}{(j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_i - j^{sa} - \mathbb{k} + 1)!} \frac{(n_i - j^{sa} - \mathbb{k} + 1)!}{(n_i - j^{sa} - \mathbb{k} + 1)!} \cdot$$



$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - l_s + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)}^{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)}^{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)} \sum_{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)}^{(j_s=j^{sa}-j_{sa}+1, \dots, j_{sa}=l_i+n+j_{sa}-j^{sa}-1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})}^{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})} \sum_{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})}^{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})} \sum_{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})}^{(n_i=n+\mathbb{k}, \dots, n_i=n+\mathbb{k})}$$

$$\sum_{(n_{ik}=n_{is}+j_{sa}^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{ik}=n_{is}+j_{sa}^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{ik}=n_{is}+j_{sa}^{ik}, \dots, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_{sa} - s - I - j_{sa}^s)!}{(n_i - j_{sa} - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_{ik} + j_{sa} - s < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
 f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (j^{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j^{sa} = l_{sa} + n - D}^{n_{is} + j_s - j^{sa}} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{is} + j_s - j^{sa}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_{sa})! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1} (l_{ik} - k - j_{sa}^{ik} + 2)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j^{sa} = l_{ik} + j_{sa} - k - j_{sa}^{ik} + 2}^{l_{sa} - k + 1} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = \mathbf{n} - j^{sa} + 1}^{n_{is} + j_s - j^{sa} - \mathbb{k}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
 \end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{j_s} \sum_{i=1}^{(j_s - k)} \sum_{j^{sa}=n-D}^{n - l_{sa} - i^{l+1}} \\
& \sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{(n_i - j_s + 1)} \\
& \frac{(j_s - 2)! \cdot (n - n_{sa} - j_s - k + 1)!}{(n_{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{j_{sa} - n - l_{sa}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{(j_s - j_{sa} + 1)} \sum_{j^{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \\
& \sum_{n_i=n+1}^n \sum_{n_{is}=n+1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(j_s - j_{sa} + 1)} \sum_{(n_{sa}=n_{ik} + j_{sa}^{ik} - j_{sa} - 1)}^{(j_s - j_{sa} + 1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j}^{D-s} &= \sum_{k=1}^{l-1} \frac{(l_i - D - s)!}{(k-2)!} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ &\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ &\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ &\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ &\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i^l}^{( )} \sum_{(j_s=1)}^{l_i+j_{sa}-i^{l-s+1}} \sum_{j^{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{sa}-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-s-l_{sa}-j_s)!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_{sa})!}{(D+j^{sa}+s-n-l_{sa}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$



$$\begin{aligned}
f_Z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j^{sa}=j_{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(j_s + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} l_{sa-k+1} \sum_{j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2}^{l_{sa}-k+1} \\
& \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot
\end{aligned}$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}^{\mathbf{l}_{sa}-\mathbf{l}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{s_i}=\mathbf{n}+j_{sa}+1)}^{(n_i-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - 1)!} \cdot$$

$$\frac{(n_i - 1)!}{(n_i + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(j_{sa} - \mathbf{l}_s - 1)!}{(j_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j_s - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{\mathbf{l}-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=j_{sa}+1}^{\mathbf{l}_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=0}^{\mathbf{l}} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=j_{sa}}$$



$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{\substack{(\cdot) \\ (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}-j_{sa}^s)!}{(n_i-\mathbf{n}-\mathbb{k})! \cdot (\mathbf{n}+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-\mathbf{n}-l_i)! \cdot (\mathbf{n}-\mathbb{k})!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} \leq l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} \leq l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} + 1 \wedge$$

$$j_s \leq j_{sa}^i - 1, j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_s \geq 4 \wedge l_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$



$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=2}^{l_{sa}-i^{l-1}} \sum_{j_{sa}=j_{sa}}^{l_{sa}-i^{l-1}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{( )}$$



$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - l_i - j_{sa}^s)!} \cdot$$

$$\sum_{k=0}^{(n)} \sum_{j_s=1}^{(n)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) n_{js} n_{ik+j_{sa}-j_{sa}^{ik}} \cdot \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + j_{sa} - n \leq l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik})) \wedge \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$



$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned}
f_z S_{j_s, j^{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s + j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - j_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_s - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{sa}-k+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{(j_s - l_s - 1)} \sum_{i=1}^{(j_s - l_s - k)} \sum_{j_{sa}=n-D-s+1}^{n-D-s+1+l_s-k} \\
& \sum_{n_i=n+l_s-k}^n \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_s+1)} \\
& \frac{(j_s - 2)! \cdot (n - n_{sa} - j^{sa} - k + 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_s - j_{sa} + 1)!}{(l_s - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+l_i+n-D-s+1)} \\
& \sum_{n_i=n+l_s-k}^n \sum_{n_{is}=n+l_s-k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(j_s+l_i+n-D-s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k}^{(j_s+l_i+n-D-s+1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - \mathbf{n} < l_{ik} \leq D + l_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \Rightarrow$$

$$\begin{aligned} & S_{i_s, j_{sa}}^{DOSL} \sum_{i=1}^{i^{l-1}(j^{sa}-j_{sa}+1)} \sum_{(j)}^{l_s+j_{sa}-k} \\ & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=l_s+j_{sa}-k+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}^{sa}+1}^{n_{is}+j_s-j_{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - j_{sa} - \mathbb{k})!} \cdot \\
& \frac{(n - j^{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - l_i - k + 1)!}{(l_s - l_i - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{( )} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-i^l-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j_{sa}^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{( )} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j_{sa}^{ik}-l-j_{sa}^{ik})!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j_{sa}^{ik}-l_{sa}^{ik})!} \cdot \\
& \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l)!}{(D+j_{sa}+s-n-l-j_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \wedge D + l_s + j_{sa}^{ik} - n - 1$$

$$D > n < n \wedge n = \mathbb{k} > 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_{2s-2} = j_{sa} - s$$

$$\begin{aligned}
f_Z S_{j_s, j_{sa}}^{DOSD} &= \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{n_{is}+j_s-j_{sa}^{ik}-\mathbb{k}}
\end{aligned}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=l_{ik}-D-j_{sa}^{ik}+1)}^{(l_s-1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_{ik}+j_{sa}^{ik}+1}$$

$$\sum_{n_{is}=n+\mathbb{k}-j_s+1}^n \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_s} \sum_{(j_s=1)}^{(l_s-1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!}.$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!}$$

$$\frac{(l_{sa} - l_s - j_{sa} - 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+1)}^{(l_s-k+1)} \sum_{(j_{sa}=D-j_{sa}^{ik}+1)}^{(D-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)}$$

$$\frac{(D + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(D + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D - l_s) \leq n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_Z: z = 1 \Rightarrow$$

$$f_Z S_{j_s}^{DO} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{K}}^n \sum_{(n_{is}=n+\mathbb{K}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{K}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{K})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!}.$$



$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=\mathbf{l}_s+j_{sa}-k+1}^{\mathbf{l}_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}}$$

$$\frac{(n_i - n_{is} - \mathbb{k} - 1)!}{(j_s - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (j^{sa} - j_s + 1)!} \cdot$$

$$\frac{(j_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-i^{l-s}+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_i-j^{sa}-\mathbb{k}+1)}$$

$$\frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot$$

$$\frac{(\mathbf{l}_{sa} - \mathbf{l}_s - j_{sa} + 1)!}{(\mathbf{l}_{sa} - j^{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - \mathbf{l}_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} -$$



$$\begin{aligned}
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{( )} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{( )} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^s)!} \cdot \\
& \frac{(l_s-k-1)!}{(n_i-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_s)!}{(D+j^{sa}+s-n-l_s-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$



$$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{sa}}^{DOSD} = & \sum_{k=1}^{i^{l-1} (j_{sa} - j_{sa} + 1)} \sum_{(j_s=2)}^{j_{sa} = l_s + j_{sa} - k} \sum_{j_{sa} = l_s + j_{sa} - k}^{j_{sa} = n - D} \\ & \sum_{n_i = n + \mathbb{K} - j_s}^n \sum_{(n_{is} = n + \mathbb{K} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{K}} \\ & \frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j_{sa} - l_s)! \cdot (j_{sa} - j_s - j_{sa} + 1)!} \cdot \\ & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \\ & \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{l_{sa} - k + 1} \sum_{j_{sa} = l_s + j_{sa} - k + 1}^{l_{sa} - k + 1} \\ & \sum_{n_i = n + \mathbb{K}}^n \sum_{(n_{is} = n + \mathbb{K} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{sa} = n - j_{sa} + 1}^{n_{is} + j_s - j_{sa} - \mathbb{K}} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{sa} - \mathbb{K} - 1)!}{(j_{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j_{sa} - \mathbb{K})!} \cdot \end{aligned}$$



$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} - 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_{sa}-l+1} \sum_{i=1}^{j^{sa}-l_{sa}+n} j^{sa}=l_{sa}+n \\
& \sum_{i=n+l_k}^n \sum_{n_{is}=n+l_k-j^{sa}-l_k+1}^{j^{sa}-l_k+1} (n_{sa}=n+l_k-j^{sa}+1) \\
& \frac{(j^{sa} - 2)! \cdot (n_{sa} - l_k - 1)!}{(j^{sa} - 2)! \cdot (n_{sa} - j^{sa} - l_k + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(l_{sa} - j^{sa} - l_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{( )} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)}^{( )} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
\end{aligned}$$



$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}.$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - \mathbf{n} < l_{sa} \leq D + l_s + j_{sa} - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s \leq j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} \neq j_{sa} + \mathbb{K} \wedge$$

$$\mathbb{K}_{Z^+} \neq 1 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DOSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i+n-D-s)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$



$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=0}^{l-1} \sum_{(j_s+\mathbf{n}-D-s+1)}^{i-k+1} \sum_{j^{sa}=j_s+j_{sa}-1}^{l_i+j_{sa}-k-s+1} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{is}+j_s-j^{sa}-\mathbb{k}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{is} + j_s - n_{sa} - j^{sa} - \mathbb{k})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} - l_s - j_{sa} + 1)!}{(j_s + l_{sa} - j^{sa} - l_s)! \cdot (j^{sa} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$



$$\begin{aligned}
& \sum_{k=1}^{\infty} \sum_{(j_s=1)}^{(\quad)} \sum_{j^{sa}=\mathbf{l}_i+\mathbf{n}+j_{sa}-D-s}^{\mathbf{l}_i+j_{sa}-\mathbf{l}^{s+1}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{sa}=\mathbf{n}-j^{sa})}^{(n_i-j^{sa}-\mathbb{k}+1)} \\
& \frac{(n_i - n_{sa} - \mathbb{k} - 1)!}{(j^{sa} - 2)! \cdot (n_i - n_{sa} - j^{sa} - \mathbb{k} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
& \frac{(l_{sa} - j_{sa} + 1)!}{(l_{sa} - j_{sa} - \mathbf{l}_s + 1)! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa})!}{(D + j^{sa} + s - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_s=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=\mathbf{l}_s-\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n-D-s+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}
\end{aligned}$$



## 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, 2.3.1.1.1.1.2.1/3  
toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/3  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.3.1/3  
toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/3  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/4

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 bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.2.1/203  
toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/228

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.3.1/203  
toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/228  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.4.1.1/3  
toplam düzgün simetrik olasılık, 2.3.1.2.1.1.4.1.1/3  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.4.2.1/3  
toplam düzgün simetrik olasılık, 2.3.1.2.1.4.2.1/3  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.4.3.1/3  
toplam düzgün simetrik olasılık, 2.3.1.2.1.4.3.1/3  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.3.1/4

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, 2.3.1.2.1.1.1.1/236



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 durumda  
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 durumda  
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 durumda  
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 durumda  
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 durumda  
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 durumda  
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 durumda  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.1.1/4

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 durumda  
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 durumda  
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 durumda  
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 durumda  
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-bağımlı 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

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 simetrinin ilk herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.3.1/8  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin 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 simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.2.1/4-5  
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 simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.3.1/4-5  
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 simetrinin 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 simetrinin 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 simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.3.1/4-5  
toplam düzgün simetrik olasılık, 2.3.1.2.6.3.1/3-4  
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin 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 simetrinin 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 simetrinin 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 simetrinin 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, 2.3.1.3.6.7.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-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 bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.1.3.1/7-8  
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, 2.3.1.1.9.4.1.1/7-8  
 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 bir ve son durumunun  
 bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.1.1/5  
 toplam düzgün simetrik olasılık,  
 2.3.1.2.7.1.1.1/3-4

toplam düzgün olmayan simetrik  
 olasılık, 2.3.1.3.7.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
 dizilimsiz bağımlı durumlu bağımsız  
 simetrisinin ilk herhangi iki ve son  
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.2.1/5  
 toplam düzgün simetrik olasılık,  
 2.3.1.2.7.1.2.1/3-4

toplam düzgün olmayan simetrik  
 olasılık, 2.3.1.3.7.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
 dizilimsiz bağımlı durumlu bağımlı  
 simetrisinin ilk herhangi iki ve son  
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.3.1/5  
 toplam düzgün simetrik olasılık,  
 2.3.1.2.7.1.3.1/3-4

toplam düzgün olmayan simetrik  
 olasılık, 2.3.1.3.7.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
 dizilimsiz bağımsız-bağımlı durumlu  
 simetrisinin ilk herhangi iki ve son  
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.1.1/7



toplam düzgün simetrik olasılık,  
2.3.1.2.7.2.1.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.2.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.2.1/7

toplam düzgün simetrik olasılık,  
2.3.1.2.7.2.2.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.2.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.3.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.2.3.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumda  
simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.4.1.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.4.1.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.4.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.4.2.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.4.2.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.4.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.4.3.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.4.3.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.4.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.6.1.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.6.1.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.6.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.6.2.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.6.2.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.6.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.6.3.1/5

toplam düzgün simetrik olasılık,  
2.3.1.2.7.6.3.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.6.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.7.1.1/7

toplam düzgün simetrik olasılık,  
2.3.1.2.7.7.1.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.7.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.7.2.1/7

toplam düzgün simetrik olasılık,  
2.3.1.2.7.7.2.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.7.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.7.3.1/5



toplam düzgün simetrik olasılık,  
2.3.1.2.7.7.3.1/3-4

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.7.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu simetrinin 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  
simetrinin 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  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.1.3.1/12-13

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.10.1.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrinin 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-bağımsız durumlu  
bağımsız simetrinin 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 bağımsız-bağımlı durumlu  
bağımlı simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.2.3.1/12-13

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.10.2.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.4.1.1/12-13

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.10.4.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımsız simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.4.2.1/12-13

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.10.4.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.4.3.1/12-13

toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.10.4.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.10.6.1.1/12-13

toplam düzgün olmayan simetrik olasılık,  
2.3.1.3.10.6.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımsız simetrinin 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 simetrinin 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  
simetrinin 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 simetrinin 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 simetrinin 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 simetrinin 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  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.1.2.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.1.2.1/17

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımlı  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.1.3.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.1.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
simetrinin 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 simetrinin 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 simetrinin 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  
simetrinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı



simetrik olasılık,  
2.3.1.1.11.4.1.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.4.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.4.2.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.4.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.4.3.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.4.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.6.1.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.6.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.6.2.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.6.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.6.3.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.6.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.7.1.1/29  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.7.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
bağımsız simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.7.2.1/29  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.7.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumda  
bağımlı simetrisinin ilk herhangi iki ve son  
durumunun bulunabileceği olaylara göre  
herhangi iki ve son durumuna bağlı

simetrik olasılık,  
2.3.1.1.11.7.3.1/16  
toplam düzgün olmayan simetrik  
olasılık, 2.3.1.3.11.7.3.1/17



VDOİHİ’de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ’de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlarında, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrisinin ilk ve herhangi bir 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 de ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesi için dış kaynak kullanılmamıştır.