

Define [

$dm_{i,j \rightarrow k} =$

$(\mathbb{E}_{\{i,j\} \rightarrow \{i,j\}} [\beta_i \mathbf{b}_i + \alpha_j \mathbf{a}_j, \eta_i \mathbf{y}_i + \xi_j \mathbf{x}_j, \mathbf{1}]$

$(\mathbf{a}\Delta_{i \rightarrow 1,2} // \mathbf{a}\Delta_{2 \rightarrow 2,3} // \overline{\mathbf{aS}}_3) (\mathbf{b}\Delta_{j \rightarrow -1,-2} // \mathbf{b}\Delta_{-2 \rightarrow -2,-3}) //$

$(\mathbf{P}_{-1,3} \mathbf{P}_{-3,1} \mathbf{a}m_{2,j \rightarrow k} \mathbf{b}m_{i,-2 \rightarrow k}),$

$d\mathbf{S}_i = \mathbb{E}_{\{i\} \rightarrow \{1,2\}} [\beta_i \mathbf{b}_1 + \alpha_i \mathbf{a}_2, \eta_i \mathbf{y}_1 + \xi_i \mathbf{x}_2, \mathbf{1}] //$ $(\overline{\mathbf{bS}}_1 \mathbf{aS}_2) //$

$dm_{2,1 \rightarrow i},$

$d\Delta_{i \rightarrow j,k} = (\mathbf{b}\Delta_{i \rightarrow 3,1} \mathbf{a}\Delta_{i \rightarrow 2,4}) //$ $(dm_{3,4 \rightarrow k} dm_{1,2 \rightarrow j})]$