

Define $\bar{R}_{i,j} = \mathbb{E}_{\{\} \rightarrow \{i,j\}} \left[-\hbar a_j b_i, -\hbar x_j y_i / B_i, \right.$

$\mathbf{1} + \text{If} \left[\$k == \mathbf{0}, \mathbf{0}, (\bar{R}_{\{i,j\}, \$k-1}) \$k [3] - \right.$

$\left(\left((\bar{R}_{\{i,j\}, \mathbf{0}}) \$k R_{1,2} (\bar{R}_{\{3,4\}, \$k-1}) \$k \right) // (\mathbf{b}m_{i,1 \rightarrow i} \mathbf{a}m_{j,2 \rightarrow j}) // \right.$
 $\left. (\mathbf{b}m_{i,3 \rightarrow i} \mathbf{a}m_{j,4 \rightarrow j}) \right) [3]]] ,$

$P_{i,j} = \mathbb{E}_{\{i,j\} \rightarrow \{\}} \left[\beta_i \alpha_j / \hbar, \eta_i \xi_j / \hbar, \right.$

$\mathbf{1} + \text{If} \left[\$k == \mathbf{0}, \mathbf{0}, (P_{\{i,j\}, \$k-1}) \$k [3] - \right.$

$\left(R_{1,2} // \left((P_{\{1,j\}, \mathbf{0}}) \$k (P_{\{i,2\}, \$k-1}) \$k \right) \right) [3]]]]$