

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

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

$\left( \left( \left( \bar{R}_{\{i,j\}, 0} \right)_{\$k} R_{1,2} \left( \bar{R}_{\{3,4\}, \$k-1} \right)_{\$k} \right) // \left( \text{bm}_{i,1 \rightarrow i} \text{am}_{j,2 \rightarrow j} \right) // \right.$   
 $\left. \left. \left( \text{bm}_{i,3 \rightarrow i} \text{am}_{j,4 \rightarrow j} \right) \right) [3] \right] \right]$ ,

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

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

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