

Define [

$\bar{R}_{i,j} = \text{If}[\$k == 0, \mathbb{E}_{\{\} \rightarrow \{i,j\}} [-\hbar a_j b_i - \hbar x_j y_i / B_i],$
Append [$\bar{R}_{\{i,j\}}, \$k-1,$
- Last [
PadRight [$\bar{R}_{\{i,j\}, 0}, \$k + 1]$] $R_{1,2}$
PadRight [$\bar{R}_{\{3,4\}, \$k-1}, \$k + 1]$ //
($b m_{i,1 \rightarrow i} a m_{j,2 \rightarrow j}$) // ($b m_{i,3 \rightarrow i} a m_{j,4 \rightarrow j}$)]]]]