$$\overset{\overset{k_1}{\longleftrightarrow}\ \overset{k_2}{\longleftrightarrow}}{\begin{matrix} n_1 \\ n_2 \end{matrix}\begin{pmatrix} A_{11} & A_{12} \\ A_{21} & A_{22} \end{pmatrix}} \times \overset{\overset{p_1}{\longleftrightarrow}\ \overset{p_2}{\longleftrightarrow}}{\begin{matrix} k_1 \\ k_2 \end{matrix}\begin{pmatrix} B_{11} & B_{12} \\ B_{21} & B_{22} \end{pmatrix}} = \overset{\overset{p_1}{\longleftrightarrow}\qquad\overset{p_2}{\longleftrightarrow}}{\begin{matrix} n_1 \\ n_2 \end{matrix}\begin{pmatrix} A_{11}B_{11} + A_{12}B_{21} & A_{11}B_{12} + A_{12}B_{22} \\ A_{21}B_{11} + A_{22}B_{21} & A_{21}B_{12} + A_{22}B_{22} \end{pmatrix}}$$