$$\underset{X}{\begin{bmatrix} A & B \\ C & D \end{bmatrix}} \times \underset{Y}{\begin{bmatrix} P & Q \\ R & S \end{bmatrix}} = \underset{Z}{\begin{bmatrix} AP+BR & AQ+BS \\ CP+DR & CQ+DS \end{bmatrix}}$$