$$\begin{pmatrix} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{pmatrix} \left(\begin{array}{c|c|c} 1 & -2 & 0 \\ 2 & -1 & 3 \end{array} \right) + \left(\begin{array}{c|c|c} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{array} \right)$$

$$= \left(\begin{array}{c|c|c} \square \times \boxed{1} + \square \times \boxed{2} + 3 & \square \times \boxed{-2} + \square \times \boxed{-1} + 0 & \square \times \boxed{0} + \boxed{2} \times \boxed{3} - 4 \\ \square \times \boxed{1} + \square \times \boxed{2} - 2 & \square \times \boxed{-2} + \square \times \boxed{-1} + 1 & \square \times \boxed{0} + \square \times \boxed{3} - 3 \\ \square \times \boxed{1} + \square \times \boxed{2} + 1 & \square \times \boxed{-2} + \square \times \boxed{-1} - 1 & \square \times \boxed{0} + \square \times \boxed{3} - 2 \end{array} \right)$$

$$= \left(\begin{array}{c|c|c} \begin{pmatrix} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{pmatrix} \begin{pmatrix} \square \\ \square \end{pmatrix} + \begin{pmatrix} 3 \\ -2 \\ 1 \end{pmatrix} & \begin{pmatrix} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{pmatrix} \begin{pmatrix} \square \\ \square \end{pmatrix} + \begin{pmatrix} 0 \\ 1 \\ -1 \end{pmatrix} & \begin{pmatrix} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{pmatrix} \begin{pmatrix} \square \\ \square \end{pmatrix} + \begin{pmatrix} -4 \\ -3 \\ -2 \end{pmatrix} \end{array} \right)$$