$$\begin{pmatrix} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{pmatrix} \left(\frac{1 \quad -2 \quad 0}{2 \quad -1 \quad 3} \right) + \begin{pmatrix} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{pmatrix}$$

$$= \begin{pmatrix} \boxed{-1} \times \boxed{1} + \boxed{2} \times \boxed{2} & \boxed{-1} \times \boxed{-2} + \boxed{2} \times \boxed{-1} & \boxed{-1} \times \boxed{0} + \boxed{2} \times \boxed{3} \\ \boxed{0} \times \boxed{1} + \boxed{1} \times \boxed{2} & \boxed{0} \times \boxed{-2} + \boxed{1} \times \boxed{-1} & \boxed{0} \times \boxed{0} + \boxed{1} \times \boxed{3} \\ \boxed{-2} \times \boxed{1} + \boxed{3} \times \boxed{2} & \boxed{-2} \times \boxed{-2} + \boxed{3} \times \boxed{-1} & \boxed{-2} \times \boxed{0} + \boxed{3} \times \boxed{3} \end{pmatrix}$$

$$+ \begin{pmatrix} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{pmatrix}$$

$$= \begin{pmatrix} \boxed{-1} \times \boxed{1} & \boxed{-1} \times \boxed{-2} & \boxed{-1} \times \boxed{0} \\ \boxed{0} \times \boxed{1} & \boxed{0} \times \boxed{-2} & \boxed{0} \times \boxed{0} \\ \boxed{-2} \times \boxed{1} & \boxed{-2} \times \boxed{-2} & \boxed{-2} \times \boxed{0} \end{pmatrix} + \begin{pmatrix} \boxed{2} \times \boxed{2} & \boxed{2} \times \boxed{-1} & \boxed{2} \times \boxed{3} \\ \boxed{1} \times \boxed{2} & \boxed{1} \times \boxed{-1} & \boxed{1} \times \boxed{3} \\ \boxed{3} \times \boxed{2} & \boxed{3} \times \boxed{-1} & \boxed{3} \times \boxed{3} \end{pmatrix}$$

$$+ \begin{pmatrix} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{pmatrix}$$

$$= \begin{pmatrix} \boxed{-1} \\ \boxed{0} \\ \boxed{-2} \end{pmatrix} \begin{pmatrix} 1 & -2 & 0 \end{pmatrix} + \begin{pmatrix} \boxed{2} \\ \boxed{1} \\ \boxed{3} \end{pmatrix} \begin{pmatrix} 2 & -1 & 3 \end{pmatrix} + \begin{pmatrix} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{pmatrix}$$