Complete the following:

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

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

$$= \begin{pmatrix} (2)\begin{pmatrix} \boxed{} & \boxed{} & \boxed{} \end{pmatrix} + \begin{pmatrix} 2 & 2 & -1 \end{pmatrix} \\ (-1)\begin{pmatrix} \boxed{} & \boxed{} & \boxed{} \end{pmatrix} + \begin{pmatrix} 2 & 1 & 0 \end{pmatrix} \\ (0)\begin{pmatrix} \boxed{} & \boxed{} & \boxed{} \end{pmatrix} + \begin{pmatrix} -2 & -2 & 2 \end{pmatrix} \end{pmatrix}$$