Complete the following:

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

$$
= \begin{pmatrix} \\ \end{pmatrix} \times (2) + \begin{pmatrix} \\ \end{pmatrix} \times (-1) + \begin{pmatrix} \\ \end{pmatrix} \times (1)
$$

$$
= (2) \times \begin{pmatrix} \\ \end{pmatrix} + (-1) \times \begin{pmatrix} \\ \end{pmatrix} + (1) \times \begin{pmatrix} \\ \end{pmatrix}
$$