



Define $t(x) = \begin{bmatrix} -1 & 3 & 1 \\ 2 & 5 & 2 \\ 1 & 0 & -1 \end{bmatrix} \cdot x$

Done

Define $v = \begin{bmatrix} -2 \\ 1 \\ 0 \end{bmatrix}$

Done

Define $w = \begin{bmatrix} 3 \\ 2 \\ -2 \end{bmatrix}$

Done