PRACTICE 3p: Determine whether or not the given vectors are in the rowspace of the given matrices. (Yes, these are the same matrices and vectors as in Assignment 3m.)

$$A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 2 & -2 \\ 5 & 3 & 2 \end{bmatrix}, \vec{x} = \begin{bmatrix} 1 \\ 0 \\ 3 \end{bmatrix}, \vec{y} = \begin{bmatrix} 1 \\ 1 \\ 0 \end{bmatrix}, \vec{z} = \begin{bmatrix} -1 \\ 1 \\ 1 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 & 2 & 0 & -3 \\ 3 & 2 & -4 & -1 \end{bmatrix}, \vec{x} = \begin{bmatrix} 7 \\ 1 \\ 5 \\ 3 \end{bmatrix}, \vec{y} = \begin{bmatrix} 1 \\ -8 \\ -2 \\ -5 \end{bmatrix}, \vec{z} = \begin{bmatrix} -3 \\ 2 \\ 8 \\ -7 \end{bmatrix}$$

$$C = \begin{bmatrix} 1 & 3 & 2 \\ 3 & 9 & 0 \\ -1 & -3 & 10 \\ 2 & 6 & -8 \end{bmatrix}, \vec{x} = \begin{bmatrix} 2 \\ 6 \\ -8 \end{bmatrix}, \vec{y} = \begin{bmatrix} -9 \\ 3 \\ 0 \end{bmatrix}, \vec{z} = \begin{bmatrix} 4 \\ 12 \\ 4 \end{bmatrix}$$