MA322-001 Jan 27 quiz   Name:_____

1.4.1 (HW1.4#25) Find scalars c_1, c_2, and c_3 such that
$$\begin{bmatrix} -7 \\ -3 \\ 10 \end{bmatrix} = c_1 \begin{bmatrix} 4 \\ 5 \\ -6 \end{bmatrix} + c_2 \begin{bmatrix} -3 \\ -2 \\ 2 \end{bmatrix} + c_3 \begin{bmatrix} 1 \\ 5 \\ -3 \end{bmatrix}$$

1.4.2 (HW1.4#13) Is $u = \begin{bmatrix} 0 \\ 4 \\ 4 \end{bmatrix}$ in the plane spanned by the columns of $A = \begin{bmatrix} 3 & -5 \\ -2 & 6 \\ 1 & 1 \end{bmatrix}$?
Why or why not?

1.5.1 Write a vector equation of the plane that passes through $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$, $\begin{bmatrix} 10 \\ 10 \\ 10 \end{bmatrix}$, and $\begin{bmatrix} 9 \\ 8 \\ 7 \end{bmatrix}$.

Remember Friday Jan 31 is the first exam!