

# QUIZ 3

Time: 10min

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1. Decide if  $\begin{bmatrix} 1 \\ 3 \\ -2 \end{bmatrix}$ ,  $\begin{bmatrix} -3 \\ -5 \\ 6 \end{bmatrix}$ , and  $\begin{bmatrix} 0 \\ 5 \\ -6 \end{bmatrix}$  are linearly independent.

2. True or False: If  $\mathbf{v}_1, \dots, \mathbf{v}_4$  are in  $\mathbf{R}^4$  and  $\mathbf{v}_3$  is *not* a linear combination of  $\mathbf{v}_1, \mathbf{v}_2, \mathbf{v}_4$ , then  $\{\mathbf{v}_1, \mathbf{v}_2, \mathbf{v}_3, \mathbf{v}_4\}$  is linearly independent. Justify your answer.

*Each problem is worth 5 points.*