

# MATH 335 Quiz 3

Name: \_\_\_\_\_

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Show all work. 5 points each.

1. Find a basis for the ColA and the NulA where  $\begin{bmatrix} 4 & 5 & 9 & -2 \\ 6 & 5 & 1 & 12 \\ 3 & 4 & 8 & -3 \end{bmatrix}$ .

2. Find  $[\mathbf{x}]_{\beta}$  where  $\beta = \left\{ \begin{bmatrix} 1 \\ 4 \\ -3 \end{bmatrix}, \begin{bmatrix} -2 \\ -7 \\ 5 \end{bmatrix} \right\}$  and  $\mathbf{x} = \begin{bmatrix} 2 \\ 9 \\ -7 \end{bmatrix}$