Quiz 3

Name: Solutions Score: _____

1. Find the inverse of the matrix A:

$$A = \begin{bmatrix} 1 & -1 \\ 4 & -5 \end{bmatrix}$$

$$A^{-1} = \begin{bmatrix} 5 & -1 \\ 4 & -1 \end{bmatrix}$$

$$A^{-1} = \begin{bmatrix} \_\_\_\_\_ & \_\_\_\_\_ \\ \_\_\_\_\_ & \_\_\_\_\_ \end{bmatrix}$$

2. Is the matrix A invertible? Circle your answer. You do not need to find the inverse A^{-1} if it exists.

$$A = \begin{bmatrix} -2 & 0 \\ -3 & 1 \end{bmatrix}$$

Invertible:

$$\det A = -2$$

Invertible Not Invertible

3. Are the vectors linearly independent? Circle your answer.

$$\begin{bmatrix} 3 \\ 1 \\ 5 \\ 8 \end{bmatrix}, \quad \begin{bmatrix} 3 \\ -6 \\ 0 \\ 8 \end{bmatrix}, \quad \begin{bmatrix} 0 \\ -35 \\ -25 \\ 0 \end{bmatrix}$$

Not independent. $-5(u_1 - u_2) = u_3$.

Independent Not Independent