

Name _____ Linear Algebra, Quiz 2

1) Write the following system of linear equations as a matrix equation.

$$\begin{aligned}2x_1 + 4x_2 - 3x_3 &= 7 \\5x_2 + x_3 &= 8 \\12x_1 + 6x_2 - 9x_3 &= 17\end{aligned}$$

2) What are the solutions to the system represented by the augmented matrix below?

$$\left[\begin{array}{ccc|c} 1 & 0 & 2 & 7 \\ 0 & 2 & 4 & 10 \end{array} \right]$$

3) What are the leading variables in the system given in (2)?

4) What are the free variables in the system given in (2)?

5) Reduce the matrix below to reduced row echelon form.

$$\left[\begin{array}{ccc} 2 & 4 & 6 \\ 3 & 6 & 7 \\ 2 & 4 & 0 \end{array} \right]$$