

Name: _____

MASTERY QUIZ DAY 10

Math 237 – Linear Algebra

Version 6

Fall 2017

Show all work. Answers without work will not receive credit. You may use a calculator, but you must show all relevant work to receive credit for a standard.

E1. Write an augmented matrix corresponding to the following system of linear equations.

$$\begin{aligned}x_1 + 4x_3 &= 1 \\x_2 - x_3 &= 7 \\x_1 - x_2 + 3x_4 &= -1\end{aligned}$$

Solution:

$$\left[\begin{array}{cccc|c} 1 & 0 & 4 & 0 & 1 \\ 0 & 1 & -1 & 0 & 7 \\ 1 & -1 & 0 & 3 & -1 \end{array} \right]$$

□

E3. Solve the system of equations

$$\begin{aligned}x + 3y - 4z &= 5 \\3x + 9y + z &= 2\end{aligned}$$

E4. Find a basis for the solution set of the system ...

V1. Determine if ... is a vector space

Solution:

□

E1:

E3:

E4:

V1: