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## MASTERY QUIZ DAY 8

Math 237 – Linear Algebra Fall 2017

## Version 5

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.

$$x_1 + 4x_3 = 1$$

$$x_2 - x_3 = 7$$

$$x_1 - x_2 + 3x_3 = -1$$

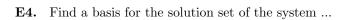
**E3.** Solve the system of equations

$$x + 3y + 3z + 7w = 0$$

$$x + 3y - z - w = 0$$

$$2x + 6y + 3z + 8w = 0$$

$$x + 3y - 2z - 3w = 0$$



**V1.** Let V be the set of all points on the line x + y = 2 with the operations, for any  $(x_1, y_1), (x_2, y_2) \in V$ ,  $c \in \mathbb{R}$ ,

$$(x_1, y_1) \oplus (x_2, y_2) = (x_1 + x_2 - 1, y_1 + y_2 - 1)$$
  
 $c \odot (x_1, y_1) = (cx_1 - (c - 1), cy_1 - (c - 2))$ 

Determine if V is a vector space or not.

E1:	E3:	E4:	V1:	E2:	