Name:	Dr. Clontz
J#:	
Date:	

MASTERY QUIZ DAY 7

Math 237 – Linear Algebra

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.

Mark: Standard E2.

Find the reduced row echelon form of the matrix below.

$$\begin{bmatrix} 2 & 1 & -1 & 0 & 5 \\ 3 & -1 & 0 & -2 & 0 \\ -1 & 0 & 5 & 0 & -1 \end{bmatrix}$$

Solution:

Version 5

$$\begin{bmatrix} 2 & 1 & -1 & 0 & | & 5 \\ 3 & -1 & 0 & -2 & | & 0 \\ -1 & 0 & 5 & 0 & | & -1 \end{bmatrix} \sim \begin{bmatrix} -1 & 0 & 5 & 0 & | & -1 \\ 2 & 1 & -1 & 0 & | & 5 \\ 3 & -1 & 0 & -2 & | & 0 \end{bmatrix} \sim \begin{bmatrix} 1 & 0 & -5 & 0 & | & 1 \\ 2 & 1 & -1 & 0 & | & 5 \\ 3 & -1 & 0 & -2 & | & 0 \end{bmatrix} \sim \begin{bmatrix} 1 & 0 & -5 & 0 & | & 1 \\ 0 & 1 & 9 & 0 & | & 3 \\ 0 & -1 & 15 & -2 & | & -3 \end{bmatrix} \sim \begin{bmatrix} 1 & 0 & -5 & 0 & | & 1 \\ 0 & 1 & 9 & 0 & | & 3 \\ 0 & 0 & 2 & | & 0 \end{bmatrix}$$

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