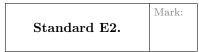
Name:	
J#:	Dr. Clontz
Date:	

## MASTERY QUIZ DAY 5

Math 237 – Linear Algebra Fall 2017

Version 2

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.



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:

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