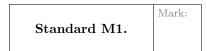
Name:	
J#:	Dr. Clontz
Date:	

## MASTERY QUIZ DAY 28

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.



Let

$$A = \begin{bmatrix} 3 \\ 5 \\ -1 \end{bmatrix} \qquad B = \begin{bmatrix} 1 & -1 & 3 & -3 \\ 2 & 1 & -1 & 2 \end{bmatrix} \qquad C = \begin{bmatrix} 2 & -1 \\ 0 & 4 \\ 3 & 1 \end{bmatrix}$$

Exactly one of the six products AB, AC, BA, BC, CA, CB can be computed. Determine which one, and compute it.

Standard M2.	Mark:			
Determine if the matrix	$\begin{bmatrix} 1 \\ 2 \\ -1 \end{bmatrix}$	$\begin{array}{c} \overline{3} \\ 7 \\ -1 \end{array}$	$\begin{bmatrix} -1 \\ 0 \\ 5 \end{bmatrix}$	is invertible.

Standard M3.

Mark:

Compute the inverse of the matrix 
$$\begin{bmatrix} 1 & 2 & 3 & 0 \\ 0 & -1 & 4 & -2 \\ 0 & 0 & 1 & 3 \\ 0 & 0 & 0 & 1 \end{bmatrix}.$$

Standard G2.

Mark:

Let  $A = \begin{bmatrix} -3 & 1 & 0 \\ -8 & 2 & -1 \\ 0 & 2 & 3 \end{bmatrix}$ . List the eigenvalues of A along with their algebraic multiplicities.

Standard G3.

Mark:

Compute the eigenspace of the eigenvalue -1 in the matrix  $\begin{bmatrix} 4 & -2 & -1 \\ 15 & -7 & -3 \\ -5 & 2 & 0 \end{bmatrix}$ .

Additional Notes/Marks