

Name:
J#:
Date:

Dr. Clontz

MASTERY QUIZ DAY 28

Math 237 – Linear Algebra

Version 5

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.

Standard M1.	Mark:
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Let

$$C = \begin{bmatrix} 2 & 3 \\ 0 & 1 \end{bmatrix}$$

$$D = \begin{bmatrix} 3 & 1 & 0 \end{bmatrix}$$

$$E = \begin{bmatrix} 2 & 0 \\ 0 & -1 \\ 1 & -1 \end{bmatrix}$$

Determine which of the six products CD , CE , DC , DE , EC , ED can be computed, and compute them.

Standard M2.	Mark:
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Determine if the matrix $\begin{bmatrix} 3 & -1 & 0 & 4 \\ 2 & 1 & 1 & -1 \\ 0 & 1 & 1 & 3 \\ 1 & -2 & 0 & 0 \end{bmatrix}$ is invertible.

Standard M3.	Mark:
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Find the inverse of the matrix $\begin{bmatrix} 8 & 5 & 3 & 0 \\ 3 & 2 & 1 & 1 \\ 5 & -3 & 1 & -2 \\ -1 & 2 & 0 & 1 \end{bmatrix}$.

Standard G2.	Mark:
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Compute the eigenvalues, along with their algebraic multiplicities, of the matrix $\begin{bmatrix} 8 & -3 & -1 \\ 21 & -8 & -3 \\ -7 & 3 & 2 \end{bmatrix}$.

Standard G3.	Mark:
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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	
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