Name:	
J#:	Dr. Clontz
Date:	

Math 237 – Linear Algebra Fall 2017

### Version 1

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

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

Standard M2.	Mar	·k:		
Determine if the matrix	$\begin{bmatrix} 3 \\ 2 \\ 0 \end{bmatrix}$	-1 1 1	$\begin{bmatrix} 0 \\ 1 \\ 1 \end{bmatrix}$	is invertible.

Standard M3.  $\begin{bmatrix} & & & \\ & & &$ 

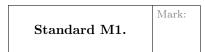
Additional Notes/Marks

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# 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

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

Standard M2. 
$$\begin{bmatrix} 2 & 1 & 0 & 3 \\ 1 & -1 & 3 & 1 \\ 3 & 2 & -1 & 7 \\ 4 & 1 & 2 & 0 \end{bmatrix}$$
 is invertible.

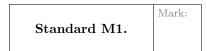
Additional Notes/Marks

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## Version 3

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

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

Standard M2.	Mark			
Determine if the matrix	$ \begin{bmatrix} -3 \\ -8 \\ 0 \end{bmatrix} $	1 2 2	$\begin{bmatrix} 0 \\ -1 \\ 3 \end{bmatrix}$	is invertible.

Standard M3.

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

Mark:

$$\text{ix} \begin{bmatrix}
 1 & 2 & 3 & 0 \\
 0 & -1 & 4 & -2 \\
 0 & 0 & 1 & 3 \\
 0 & 0 & 0 & 1
 \end{bmatrix}.$$

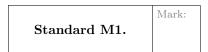
 ${\bf Additional\ Notes/Marks}$ 

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## Version 4

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

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

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

Standard M3.

Mark:

Find the inverse of the matrix  $\begin{bmatrix} 3 & 1 & 3 \\ 2 & -1 & -6 \\ 1 & 1 & 4 \end{bmatrix}.$ 

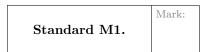
Additional Notes/Marks

Name:	
J#:	Dr. Clontz
Date:	

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## 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.



Let

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

Standard M2.	Ма	rk:			
Determine if the matrix	$\begin{bmatrix} 2 \\ 1 \\ 3 \\ 4 \end{bmatrix}$	$ \begin{array}{c} 1 \\ -1 \\ 2 \\ 1 \end{array} $	$0\\3\\-1\\2$	$\begin{bmatrix} 3 \\ 1 \\ 7 \\ 0 \end{bmatrix}$	is invertible.

Standard M3.

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

Mark:

$$\text{ix} \begin{bmatrix}
 1 & 2 & 3 & 0 \\
 0 & -1 & 4 & -2 \\
 0 & 0 & 1 & 3 \\
 0 & 0 & 0 & 1
 \end{bmatrix}.$$

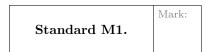
 ${\bf Additional\ Notes/Marks}$ 

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### Version 6

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

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

Standard M2. 
$$\begin{bmatrix} 2 & 1 & 0 & 3 \\ 1 & -1 & 0 & 1 \\ 3 & 2 & -1 & 7 \\ 4 & 1 & 2 & 0 \end{bmatrix}$$
 is invertible.

Standard M3.

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

 ${\bf Additional\ Notes/Marks}$