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| Name: |
| J#:   |
| Date: |

Dr. Clontz

# MASTERY QUIZ DAY 13

Math 237 – Linear Algebra

## Version 1

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.

|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 1 \\ 4 \\ 3 \end{bmatrix}$  is a linear combination of the vectors  $\begin{bmatrix} 2 \\ 3 \\ -1 \end{bmatrix}$ ,  $\begin{bmatrix} 1 \\ -1 \\ 0 \end{bmatrix}$ , and  $\begin{bmatrix} -3 \\ -2 \\ 5 \end{bmatrix}$ .

|                     |       |
|---------------------|-------|
| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the set of vectors  $\left\{ \begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}, \begin{bmatrix} 1 \\ 2 \\ -1 \end{bmatrix}, \begin{bmatrix} 1 \\ 3 \\ -2 \end{bmatrix} \right\}$  is linearly dependent or linearly independent

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| <b>Additional Notes/Marks</b> |  |
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Math 237 – Linear Algebra

## Version 2

Fall 2017

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|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 0 \\ 0 \\ 2 \end{bmatrix}$  can be written as a linear combination of the vectors  $\begin{bmatrix} -1 \\ -9 \\ 15 \end{bmatrix}$  and  $\begin{bmatrix} 1 \\ 5 \\ -5 \end{bmatrix}$ .

|                     |       |
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| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the set of vectors  $\left\{ \begin{bmatrix} 1 \\ 0 \\ 1 \end{bmatrix}, \begin{bmatrix} 1 \\ 2 \\ -1 \end{bmatrix}, \begin{bmatrix} 1 \\ 3 \\ -2 \end{bmatrix} \right\}$  is linearly dependent or linearly independent

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| <b>Additional Notes/Marks</b> |  |
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Math 237 – Linear Algebra

## Version 3

Fall 2017

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|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 0 \\ 1 \\ -2 \\ 1 \end{bmatrix}$  can be written as a linear combination of the vectors  $\begin{bmatrix} 5 \\ 2 \\ -3 \\ 2 \end{bmatrix}$ ,  $\begin{bmatrix} 3 \\ 1 \\ 1 \\ 0 \end{bmatrix}$ , and  $\begin{bmatrix} 8 \\ 3 \\ 5 \\ -1 \end{bmatrix}$ .

|                     |       |
|---------------------|-------|
| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the vectors  $\begin{bmatrix} 1 \\ 1 \\ -1 \end{bmatrix}$ ,  $\begin{bmatrix} 3 \\ -1 \\ 1 \end{bmatrix}$ , and  $\begin{bmatrix} 2 \\ 0 \\ -2 \end{bmatrix}$  are linearly dependent or linearly independent

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| <b>Additional Notes/Marks</b> |  |
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# MASTERY QUIZ DAY 13

Math 237 – Linear Algebra

## Version 4

Fall 2017

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|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 1 \\ 4 \\ 3 \end{bmatrix}$  is a linear combination of the vectors  $\begin{bmatrix} 3 \\ 0 \\ -1 \end{bmatrix}$ ,  $\begin{bmatrix} 1 \\ -1 \\ 4 \end{bmatrix}$ , and  $\begin{bmatrix} 5 \\ 1 \\ -6 \end{bmatrix}$ .

|                     |       |
|---------------------|-------|
| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the set of vectors  $\left\{ \begin{bmatrix} 3 \\ -1 \\ 0 \\ 4 \end{bmatrix}, \begin{bmatrix} 1 \\ 2 \\ -2 \\ 1 \end{bmatrix}, \begin{bmatrix} 3 \\ -8 \\ 6 \\ 5 \end{bmatrix} \right\}$  is linearly dependent or linearly independent.

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| <b>Additional Notes/Marks</b> |  |
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# MASTERY QUIZ DAY 13

Math 237 – Linear Algebra

## Version 5

Fall 2017

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|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 0 \\ 0 \\ 2 \end{bmatrix}$  can be written as a linear combination of the vectors  $\begin{bmatrix} -1 \\ -9 \\ 15 \end{bmatrix}$  and  $\begin{bmatrix} 1 \\ 5 \\ -5 \end{bmatrix}$ .

|                     |       |
|---------------------|-------|
| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the set of vectors  $\left\{ \begin{bmatrix} -3 \\ 8 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 \\ 2 \\ 2 \end{bmatrix}, \begin{bmatrix} 0 \\ -1 \\ 3 \end{bmatrix} \right\}$  is linearly dependent or linearly independent

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# MASTERY QUIZ DAY 13

Math 237 – Linear Algebra

## Version 6

Fall 2017

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|                     |       |
|---------------------|-------|
| <b>Standard V2.</b> | Mark: |
|---------------------|-------|

Determine if  $\begin{bmatrix} 1 \\ 4 \\ 3 \end{bmatrix}$  is a linear combination of the vectors  $\begin{bmatrix} 3 \\ 0 \\ -1 \end{bmatrix}$ ,  $\begin{bmatrix} 1 \\ -1 \\ 4 \end{bmatrix}$ , and  $\begin{bmatrix} 5 \\ 1 \\ -6 \end{bmatrix}$ .

|                     |       |
|---------------------|-------|
| <b>Standard S1.</b> | Mark: |
|---------------------|-------|

Determine if the set of vectors  $\left\{ \begin{bmatrix} -3 \\ 8 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 \\ 2 \\ 2 \end{bmatrix}, \begin{bmatrix} 0 \\ -1 \\ 3 \end{bmatrix} \right\}$  is linearly dependent or linearly independent

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