

Name _____

Find the slope of the line passing through the given pair of points.

1) (7, 3) and (9, 7)

A) $\frac{1}{2}$

B) $\frac{5}{8}$

C) - 2

D) 2

2) (6, 7) and (6, -6)

A) 0

B) $\frac{1}{12}$

C) Undefined

D) $\frac{13}{12}$

3) (-1, -4) and (7, -4)

A) $-\frac{4}{3}$

B) 0

C) - 1

D) Undefined

Find the slope of the line.

4) $2x + 5y = 8$

A) $\frac{2}{5}$

B) $\frac{5}{2}$

C) $\frac{8}{5}$

D) $-\frac{2}{5}$

Write an equation for the line. Use slope-intercept form, if possible.

5) Through (11, 5), $m = 4$

A) $y = -4x + 39$

B) $y = 4x + 5$

C) $y = 4x - 39$

D) $y = -4x - 9$

6) Through (-5, -2) and (-11, -11)

A) $y = \frac{3}{2}x - \frac{16}{3}$

B) $y = \frac{3}{2}x + \frac{11}{2}$

C) $y = \frac{2}{3}x + \frac{4}{3}$

D) $y = -\frac{3}{2}x - \frac{19}{2}$

Write an equation for the line.

7) Through (-2, 3), parallel to $4x + 3y = 8$

A) $y = \frac{4}{3}x + \frac{17}{3}$

B) $y = \frac{4}{3}x + \frac{1}{3}$

C) $y = -\frac{4}{3}x + \frac{17}{3}$

D) $y = -\frac{4}{3}x + \frac{1}{3}$

8) Through (-5, 2), perpendicular to $10x + 3y = 9$

A) $y = \frac{10}{3}x + \frac{56}{3}$

B) $y = -\frac{10}{3}x - \frac{44}{3}$

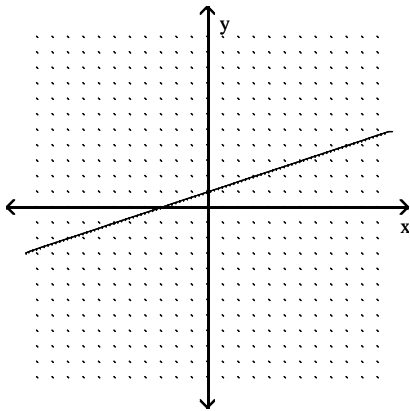
C) $y = -\frac{3}{10}x + \frac{1}{2}$

D) $y = \frac{3}{10}x + \frac{7}{2}$

Practice Exam One

Estimate the slope of the line.

9)



A) 3

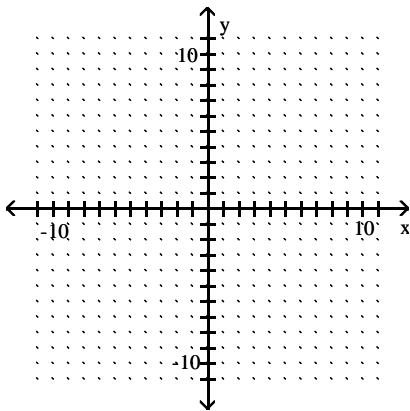
B) $-\frac{1}{3}$

C) $\frac{1}{3}$

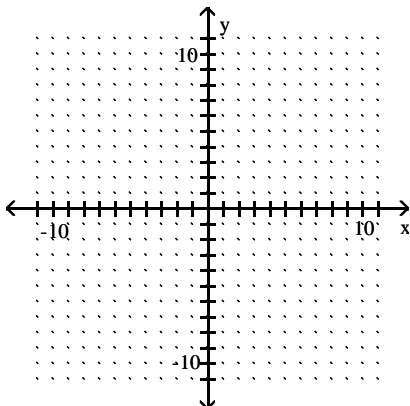
D) -3

Graph the equation.

10) $y = -\frac{1}{2}x - 2$



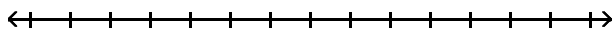
11) $y = 1$



Practice Exam One

Solve and graph the inequality and graph the solution.

12) $3 - 10z - 2 \geq -11z + 7$



Solve the system.

13) $x + 6y = -36$
 $-5x + 7y = -42$

- A) (0, -6) B) (1, -7) C) No solution D) (6, 0)

Write an augmented matrix for the system of equations.

14) $9x + 4y = 13$
 $6x + 2y = 8$

- A) $\left[\begin{array}{cc|c} 13 & 4 & 9 \\ 8 & 6 & 2 \end{array} \right]$ B) $\left[\begin{array}{cc|c} 9 & 6 & 13 \\ 4 & 2 & 8 \end{array} \right]$ C) $\left[\begin{array}{cc|c} 9 & 4 & 8 \\ 2 & 6 & 13 \end{array} \right]$ D) $\left[\begin{array}{cc|c} 9 & 4 & 13 \\ 6 & 2 & 8 \end{array} \right]$

Write the system of equations associated with the augmented matrix. Do not solve.

15) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -8 \\ 0 & 1 & 0 & 10 \\ 0 & 0 & 1 & -2 \end{array} \right]$

- A) $x = -6$
 $y = 12$
 $z = 0$ B) $x = 0$
 $y = 2$
 $z = -10$ C) $x = -8$
 $y = 10$
 $z = -2$ D) $x = 8$
 $y = -10$
 $z = 2$

Use the Gauss-Jordan method to solve the system of equations.

16) $6x + 6y = -12$
 $3x + 2y = -8$

- A) No solution B) (2, -4) C) (-4, -2) D) (-4, 2)

17) $-5x - 7y = -8$
 $-20x - 28y = -2$

- A) (4, 4) B) No Solution C) $\left(\frac{8}{5} - \frac{7}{5}y, y \right)$ D) (-8, -2)

18) $x - y + z = 8$
 $x + y + z = 6$
 $3x + y + 3z = 10$

- A) (-2, 1, 9) B) (5, 3, 6) C) (4, 0, 4) D) No solution

19) $x - y + 2z = -3$
 $5x + z = -3$
 $x + 5y + z = -18$

- A) No solution B) (-3, 0, -3) C) (0, -3, -3) D) (-3, -3, 0)

Practice Exam One

Provide an appropriate response.

20) Give the dimensions of the following matrix.

$$\begin{bmatrix} 1 & 2 & 3 \\ -6 & -5 & -4 \\ 2 & -1 & 2 \\ 4 & -7 & 0 \end{bmatrix}$$

A) 4×3

B) 3×3

C) 4×4

D) 3×4

Find the values of the variables in the matrix.

$$21) \begin{bmatrix} 2 & -7 & x \\ 7 & y & 6 \end{bmatrix} = \begin{bmatrix} m & -7 & -1 \\ n & -2 & p \end{bmatrix}$$

A) $m = 2, x = -7, n = 7, y = -2, p = 6$

B) $m = 7, x = -7, n = 2, y = -2, p = 6$

C) $m = 2, x = -1, n = 7, y = -2, p = 6$

D) $m = 2, x = -1, n = -7, y = -2, p = 6$

Perform the indicated operation.

$$22) \begin{bmatrix} -1 & 5 \\ 0 & 4 \\ 9 & -4 \end{bmatrix} - \begin{bmatrix} 2 & 1 \\ 7 & 4 \\ 1 & 2 \end{bmatrix}$$

A) $\begin{bmatrix} 1 & 4 \\ 7 & 0 \\ 8 & -2 \end{bmatrix}$

B) $\begin{bmatrix} 1 & 6 \\ 7 & 8 \\ 10 & -2 \end{bmatrix}$

C) $\begin{bmatrix} 3 & -4 \\ 7 & 0 \\ -8 & 6 \end{bmatrix}$

D) $\begin{bmatrix} -3 & 4 \\ -7 & 0 \\ 8 & -6 \end{bmatrix}$

$$23) \begin{bmatrix} -2 & 1 \\ 2 & 5 \end{bmatrix} + \begin{bmatrix} 6 & 2 \\ 6 & -1 \end{bmatrix}$$

A) $\begin{bmatrix} 4 & 0 \\ 4 & -3 \end{bmatrix}$

B) $[19]$

C) $\begin{bmatrix} 3 & 4 \\ 0 & 4 \end{bmatrix}$

D) $\begin{bmatrix} 4 & 3 \\ 8 & 4 \end{bmatrix}$

$$24) [-3 \ 9 \ 2] - [4 \ 3]$$

A) Not defined

B) $[-7 \ 9 \ -1]$

C) $[-7 \ 6 \ -1]$

D) $[-7 \ 6 \ 2]$

$$25) \text{ Let } C = \begin{bmatrix} 6 \\ -2 \\ 8 \end{bmatrix}. \text{ Find } (1/2)C.$$

A) $\begin{bmatrix} 6 \\ -1 \\ 8 \end{bmatrix}$

B) $\begin{bmatrix} 12 \\ -4 \\ 16 \end{bmatrix}$

C) $\begin{bmatrix} 3 \\ -1 \\ 4 \end{bmatrix}$

D) $\begin{bmatrix} 3 \\ -2 \\ 8 \end{bmatrix}$

$$26) \text{ Let } A = \begin{bmatrix} 2 & 3 \\ 2 & 5 \end{bmatrix} \text{ and } B = \begin{bmatrix} 0 & 4 \\ -1 & 6 \end{bmatrix}. \text{ Find } 3A + B.$$

A) $\begin{bmatrix} 6 & 13 \\ 5 & 21 \end{bmatrix}$

B) $\begin{bmatrix} 6 & 7 \\ 5 & 11 \end{bmatrix}$

C) $\begin{bmatrix} 6 & 13 \\ 1 & 11 \end{bmatrix}$

D) $\begin{bmatrix} 6 & 21 \\ 3 & 33 \end{bmatrix}$

Find the indicated matrix product, if possible.

$$27) A = \begin{bmatrix} 3 & -2 & 1 \\ 0 & 4 & -2 \end{bmatrix}, B = \begin{bmatrix} 3 & 0 \\ -2 & 2 \end{bmatrix}. \text{ Find } AB.$$

A) $\begin{bmatrix} 9 & -6 \\ -6 & 12 \\ 3 & -6 \end{bmatrix}$

B) $\begin{bmatrix} 9 & -6 & 3 \\ -6 & 12 & -6 \end{bmatrix}$

C) AB is not defined.

D) $\begin{bmatrix} 9 & 0 \\ 0 & 8 \end{bmatrix}$

Practice Exam One

28) $A = \begin{bmatrix} 1 & 3 & -2 \\ 2 & 0 & 4 \end{bmatrix}$, $B = \begin{bmatrix} 3 & 0 \\ -2 & 1 \\ 0 & 4 \end{bmatrix}$. Find AB .

A) AB is not defined.

B) $\begin{bmatrix} -5 & -3 \\ 16 & 6 \end{bmatrix}$

C) $\begin{bmatrix} 3 & -6 & 0 \\ 0 & 0 & 16 \end{bmatrix}$

D) $\begin{bmatrix} -3 & -5 \\ 6 & 16 \end{bmatrix}$

Find the inverse of the matrix.

29) $A = \begin{bmatrix} 5 & 5 \\ 1 & -4 \end{bmatrix}$

A)

$$\begin{bmatrix} \frac{1}{25} & -\frac{1}{5} \\ \frac{4}{25} & \frac{1}{5} \end{bmatrix}$$

B)

$$\begin{bmatrix} \frac{4}{25} & \frac{1}{5} \\ \frac{1}{25} & -\frac{1}{5} \end{bmatrix}$$

C)

$$\begin{bmatrix} \frac{4}{25} & -\frac{1}{5} \\ -\frac{1}{25} & -\frac{1}{5} \end{bmatrix}$$

D)

$$\begin{bmatrix} -\frac{1}{5} & \frac{1}{5} \\ \frac{1}{25} & \frac{4}{25} \end{bmatrix}$$

30)

$$\begin{bmatrix} 1 & 0 & 0 \\ -1 & 1 & 0 \\ 1 & 1 & 1 \end{bmatrix}$$

A)

$$\begin{bmatrix} -1 & 0 & 0 \\ -1 & -1 & 0 \\ -1 & -1 & -1 \end{bmatrix}$$

B)

$$\begin{bmatrix} 1 & -1 & 1 \\ 0 & 1 & -1 \\ 0 & 0 & 1 \end{bmatrix}$$

C)

$$\begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & 1 \end{bmatrix}$$

D)

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

Solve the system of equations by using the inverse of the coefficient matrix.

31) $8x - 6y = 2$
 $-8x + 6y = -6$

A) (2, -6)

B) (-1, -1)

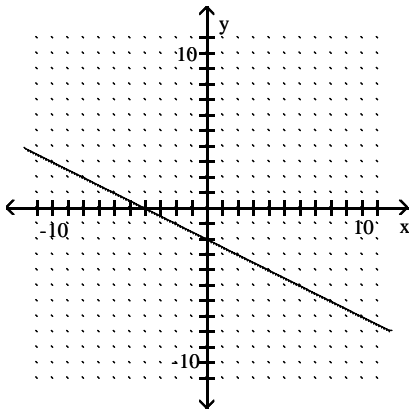
C) No inverse, $\left(\frac{1}{4} - \frac{4}{3}y, y\right)$

D) No inverse, no solution for system

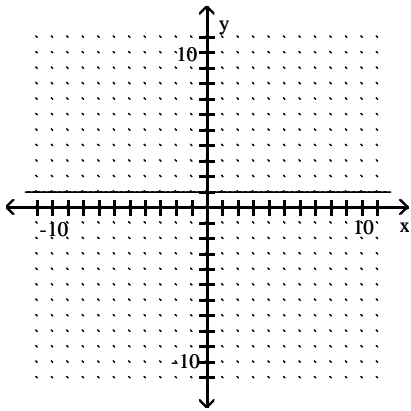
Answer Key

Testname: M1324 REVIEW 1

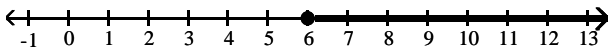
- 1) D
- 2) C
- 3) B
- 4) D
- 5) C
- 6) B
- 7) D
- 8) D
- 9) C
- 10)



11)



12) $[6, \infty)$



- 13) A
- 14) D
- 15) C
- 16) D
- 17) B
- 18) D
- 19) C
- 20) A
- 21) C
- 22) D
- 23) D

Answer Key

Testname: M1324 REVIEW 1

- 24) A
- 25) C
- 26) A
- 27) C
- 28) D
- 29) B
- 30) D
- 31) D