Math 112B Group Review Assignment (3.1–4.3)

Print Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. Write your answer in the blank provided and record your answer on the scantrom answer sheet. (You will not be getting the scantron answer sheet back.) If a question appears to not have instructions, the instructions for the previous question apply. Some questions' answers do not appear on the same page. Good luck and have fun!

Evaluate the function.

1) Find f(–3) when $f(x) = 2x^2 - 3x + 6$. 1) _____

A) 33

B) 15

C) 21

D) 18

Complete the ordered pair so that it is a solution of the given linear equation.

2) $y = -x + 6$; (2,), (6,), (0,) 2) _____

A) (2, 4) (6, 0) (0, 6)

B) (2, 2) (6, 6) (0, 0)

C) (2, 8) (6, 0) (0, 6)

D) (2, 4) (6, –2) (0, 6)

Solve the system of equations.

3) $\begin{cases} 2x + 5y = 20 \\ -7x - 3y = -41 \end{cases}$ 3) _____

A) (–5, 2)

B) (–5, –2)

C) (5, 2)

D) (5, –2)

4) $\begin{cases} 4x + 3y = 37 \\ -2x - 3y = -47 \end{cases}$ 4) _____

A) (3, –19)

B) infinite number of solutions

C) (–5, 19)

D) (4, –19)

5) $\begin{cases} x + y = 6 \\ x - y = -2 \end{cases}$ 5) _____

A) (–2, 5)

B) (1, 5)

C) (2, 4)

D) no solution

Determine whether the ordered pair is a solution of the system of linear equations.

6) (–2, 1); 6) _____

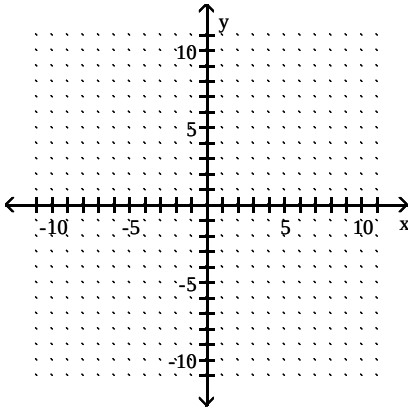
$$\begin{cases} 4x + y = -9 \\ 2x + 4y = -8 \end{cases}$$

A) Yes

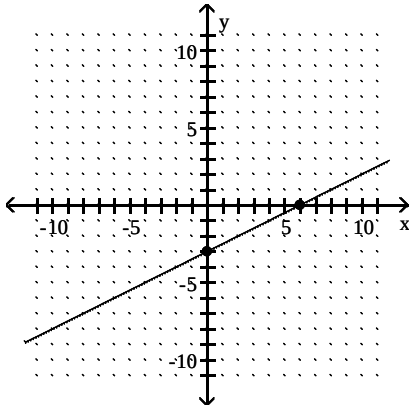
B) No

Graph the linear equation by finding and plotting its intercepts.

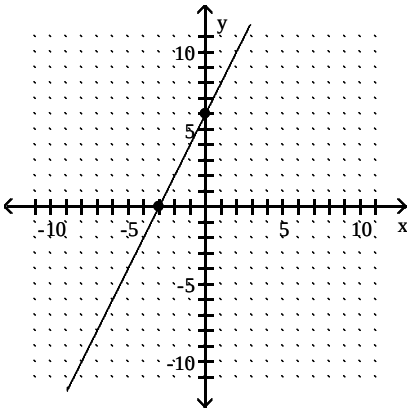
7) 5x – 10y = 30 7) _____



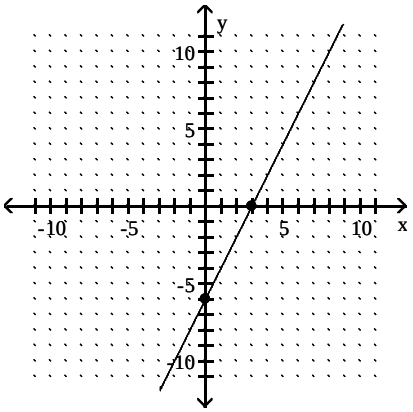
A)



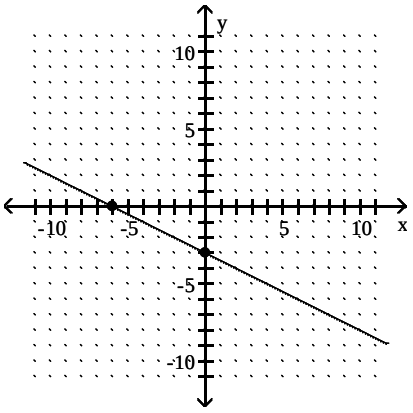
B)



C)

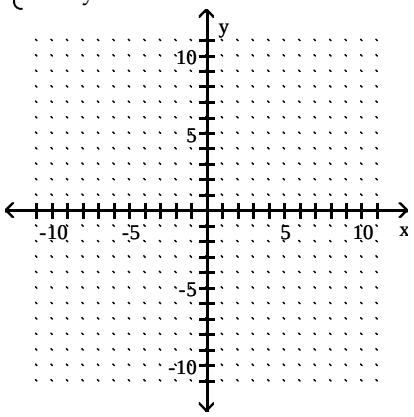


D)



Solve the system of equations. Graph paper is provided if you want to solve it graphically.

8) $\begin{cases} 2x + y = -4 \\ 3x + y = -5 \end{cases}$ 8) _____



A) (–2, –1)

B) no solution

C) (–1, –2)

D) (1, 2)

Solve the system of equations.

9) $\begin{cases} y = 1.2x - 2.2 \\ y = 0.6x + 0.26 \end{cases}$ 9) _____

A) (4.1, 2.72)

B) infinite number of solutions

C) (–4.1, 2.72)

D) no solution

10) $\begin{cases} x - 3y = 15 \\ -5x - 4y = -37 \end{cases}$ 10) _____

A) (9, –2)

B) (–9, –1)

C) no solution

D) (8, –1)

11) $\begin{cases} -6y = x - 13 \\ 3x + 5y = 26 \end{cases}$ 11) _____

A) (–7, 2)

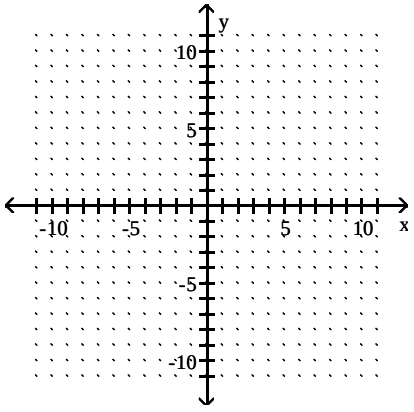
B) (6, 2)

C) no solution

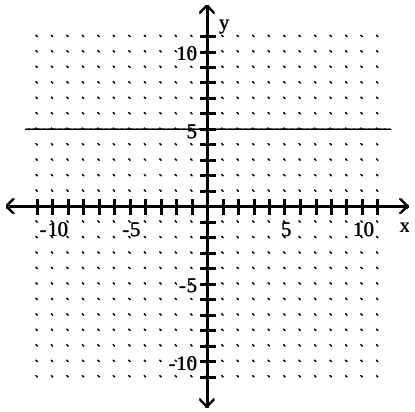
D) (7, 1)

Graph the linear equation.

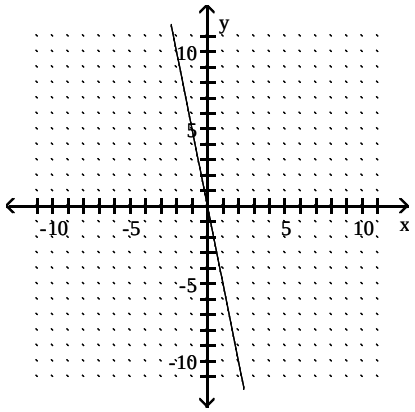
12) $y = 5x$ 12) _____



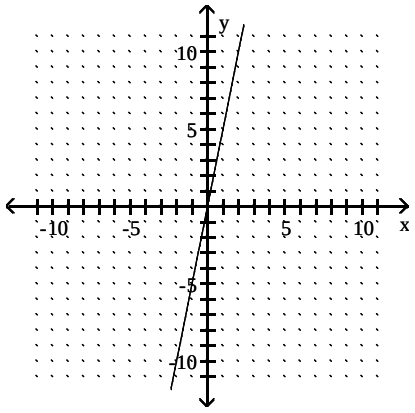
A)



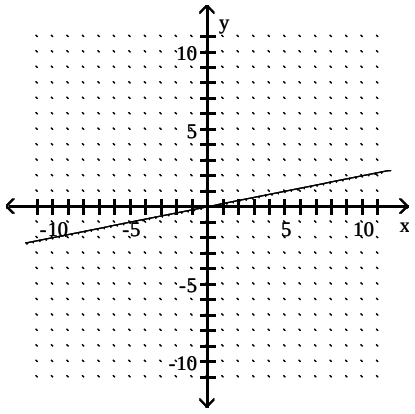
B)



C)



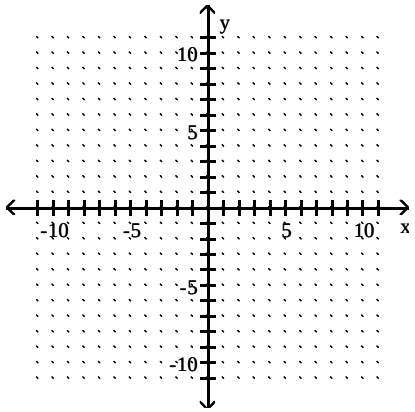
D)



Find three ordered pair solutions by completing the table. Then use the ordered pairs to graph the equation.

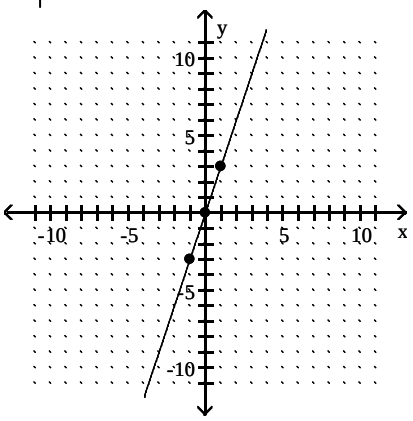
13) $y = -4x - 3$ 13) _____

x	y
0	
1	
−1	



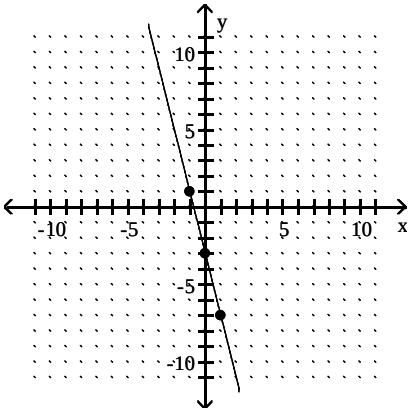
A)

x	y
0	0
1	3
−1	−3



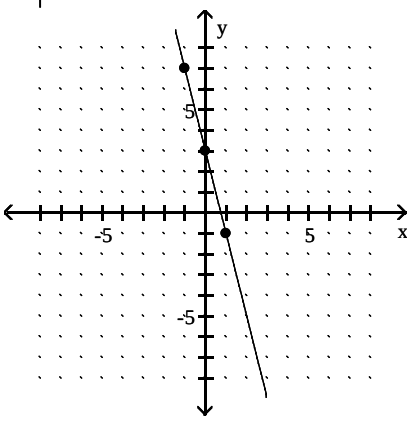
B)

x	y
0	−3
1	−7
−1	1



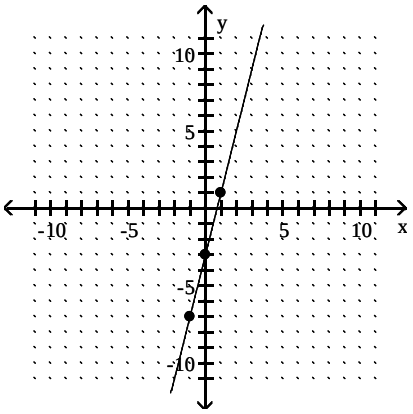
C)

x	y
0	3
1	–1
–1	7



D)

x	y
0	–3
1	1
–1	–7



Determine whether the pair of lines is parallel, perpendicular, or neither.

14) $4x - 12y = 12$
$32x + 16y = -3$ 14) _____

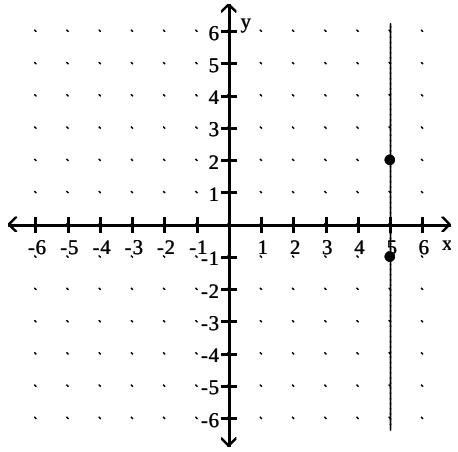
A) parallel

B) perpendicular

C) neither

Find the slope of the line.

15) 15) _____



A) m = 1

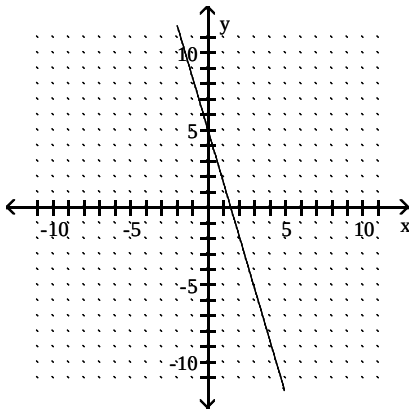
B) m = 0

C) undefined slope

D) m = –1

Match the graph with its equation.

16) 16) _____



A) $y = -3.4x + 5$

B) $x = 5$

C) $y = -3.4x$

D) $y = 5$

Find an equation of the line described.

17) With undefined slope, through $\left(-\frac{1}{2}, -9\right)$ 17) _____

A) $-\frac{1}{2}x - 9y = 0$

B) $y = -9$

C) $x = -\frac{1}{2}$

D) $-\frac{1}{2}x + y = -9$

Solve.

18) To the nearest dollar, the average tuition at a public four–year college was \$3057 in 1997 and \$3237 in 1999. Use the ordered pairs (1997, \$3057) and (1999, \$3237) to find and interpret the slope of the line representing the change in tuition (to the nearest dollar per year). 18) _____

A) tuition decreased \$90 per year

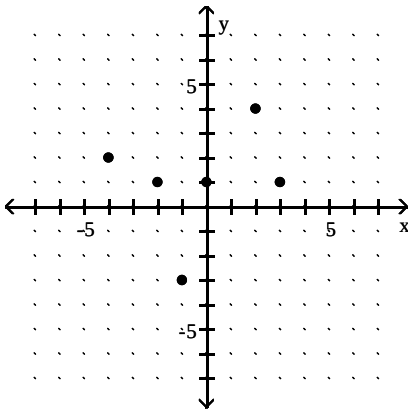
B) tuition increased \$101 per year

C) tuition increased \$90 per year

D) tuition increased \$107 per year

Determine whether the graph is the graph of a function.

19) 19) _____



A) yes

B) no

Find an equation of the line with the given slope that passes through the given point. Write the equation in the form Ax + By = C.

20) $m = \frac{1}{8}$; (–9, 4) 20) _____

A) $8x - 8y = -41$

B) $x - 8y = -41$

C) $x - 8y = -104$

D) $x - 8y = 41$

Answer Key
Testname: 12B_GRPREVASS_31_43

1) A
Objective: (3.6) Use function notation.
2) A
Objective: (3.1) Find the missing coordinate of an ordered pair solution, given one coordinate of the pair.
3) C
Objective: (4.3) Use the addition method to solve a system of linear equations.
4) C
Objective: (4.3) Use the addition method to solve a system of linear equations.
5) C
Objective: (4.3) Use the addition method to solve a system of linear equations.
6) B
Objective: (4.1) Determine if an ordered pair is a solution of a system of equations in two variables.
7) A
Objective: (3.3) Graph a linear equation by finding and plotting intercepts.
8) C
Objective: (4.1) Solve a system of linear equations by graphing.
9) A
Objective: (4.2) Concept Extensions
10) A
Objective: (4.2) Use the substitution method to solve a system of linear equations.
11) D
Objective: (4.2) Use the substitution method to solve a system of linear equations.
12) C
Objective: (3.2) Graph a linear equation by finding and plotting ordered pair solutions.
13) B
Objective: (3.2) Graph a linear equation by finding and plotting ordered pair solutions.
14) C
Objective: (3.4) Compare the slopes of parallel and perpendicular lines.
15) C
Objective: (3.4) Find the slopes of horizontal and vertical lines.
16) A
Objective: (3.3) Identify and graph vertical and horizontal lines.
17) C
Objective: (3.5) Find equations of vertical and horizontal lines.
18) C
Objective: (3.4) Use slope as a rate of change.
19) A
Objective: (3.6) Use the vertical line test.
20) B
Objective: (3.5) Use the point–slope form to find an equation of a line given its slope and a point of the line.