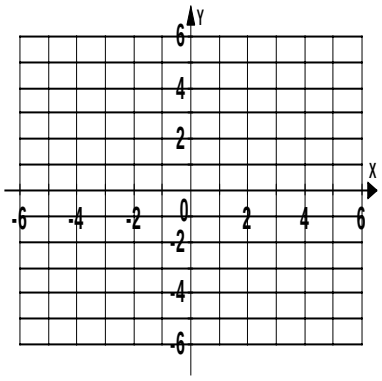
Name _____ Date _____

Additional Exercises 4.1
Form I
Graphing Linear Equations in Two Variables

Plot the given points in a rectangular coordinate system and then state the quadrant in which each point lies.

1. (3, 5) 1. _____
2. (–4, 1) 2. _____
3. (–1, –2) 3. _____
4. (2, 3) 4. _____
5. (3, –4) 5. _____



Determine whether the ordered pair is a solution of the given equation.

6. (2, –2) 6. _____
$y = x - 4$

7. (–1, –4) 7. _____
$x - y = 3$

8. (2, 0) 8. _____
$2x - y = -4$

Find the solution to the equation using the value given for x.

9. $y = 7x$; $x = 6$ 9. _____

10. $y = 6x + 5$; $x = 2$ 10. _____

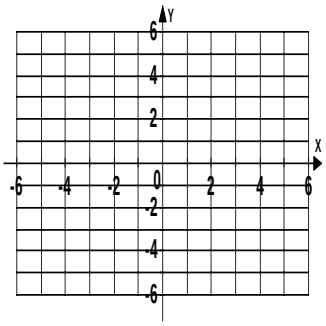
11. $y = -3x - 4$; $x = -1$ 11. _____

Name _____ Date _____

Graph the linear equation in two variables.

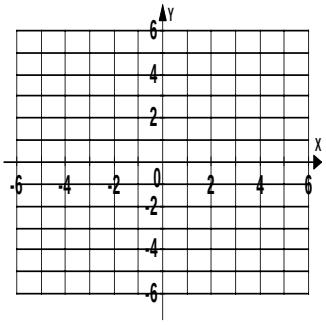
12. $y = 2x$

12.



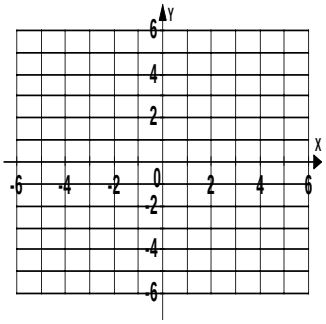
13. $y = -x - 1$

13.



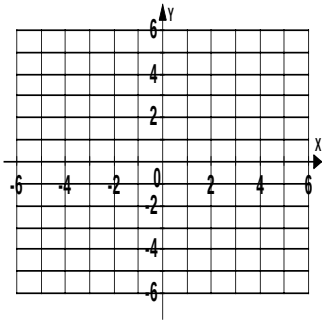
14. $y = 4x + 3$

14.



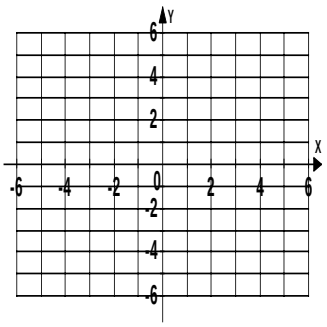
15. $y = \frac{1}{3}x - 5$

15.

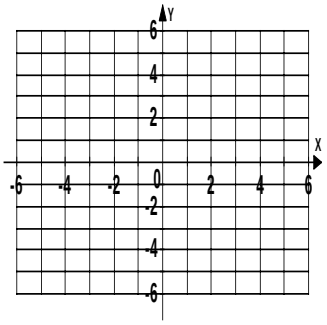


Name _____ Date _____

16. $y = 3$

16. 

17. $x = 2$

17. 

18. The linear equation in two variables $y = 0.10x + 175$ models the total weekly cost, y, in dollars, for renting and driving it x miles. the equation indicates that the rental company charges a fixed amount of \$175 for the week plus a cost of \$0.10 for each mile the car is driven. Find the solution of $y = 0.10x + 175$ using 185 for x .

18. _____

19. The linear equation in two variables $y = 32x$ models the speed, y, in feet per second, of a ball dropped from a tower x seconds after it is dropped. The equation indicates that the speed of the ball increases by 32 feet per second for every second that passes. Find a solution of $y = 32x$ using 3 for x.

19. _____

20. The linear equation in two variables $y = 124 - 8x$ models the amount of water, y, in ounces, remaining in a leaky bucket x minutes after the bucket is filled. The equation indicates that the bucket initially contains 124 ounces of water and loses 8 ounces each minute. Find a solution of $y = 124 - 8x$ using 3 for x.

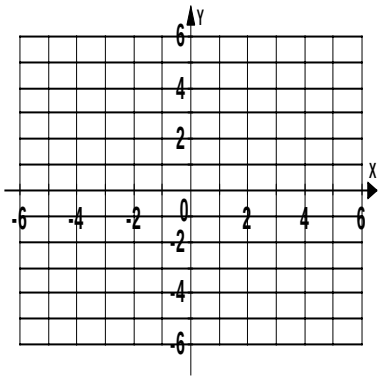
20. _____

Name _____ Date _____

Additional Exercises 4.1
Form II
Graphing Linear Equations in Two Variables

Plot the given points in a rectangular coordinate system and then state the quadrant in which each point lies.

1. (1, –5) 1. _____
2. (–2, 4) 2. _____
3. (–3, –3) 3. _____
4. (6, 1) 4. _____
5. (–4, 2) 5. _____



Determine whether the ordered pair is a solution of the given equation.

6. (3, 1) 6. _____
$y = x - 4$

7. (3, –5) 7. _____
$x - y = 2$

8. (1, 2) 8. _____
$2x + 3y = 8$

Find the solution to the equation using the value given for x.

9. $y = -7x - 6$; $x = 5$ 9. _____

10. $y = -8x - 3$; $x = 4$ 10. _____

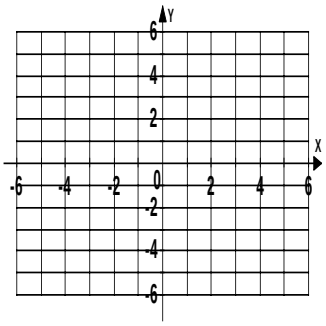
11. $y = -2x + 5$; $x = -1$ 11. _____

Name _____ Date _____

Graph the linear equation in two variables.

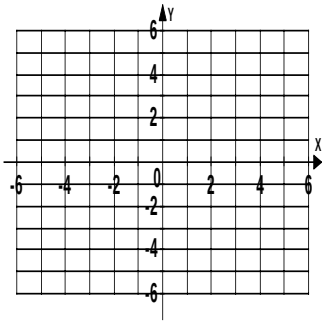
12. $y = -3x$

12.



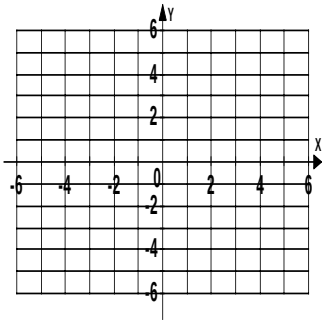
13. $y = 2x - 4$

13.



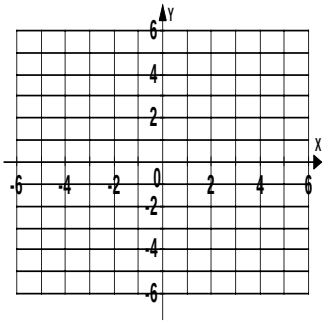
14. $y = \frac{4}{5}x + 1$

14.



15. $y = -\frac{2}{3}x - 3$

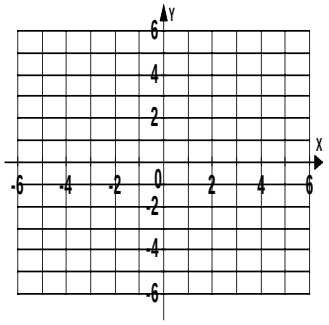
15.



Name _____ Date _____

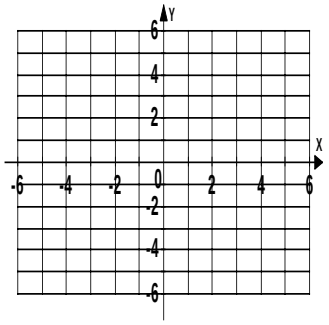
16. $y = 5x$

16.



17. $y = -1$

17.



Solve the problem.

18. The linear equation in two variables $y = 2x + 40$ models the total cost, y, in dollars, for towing a car x miles. The equation indicates that the towing company charges a fixed amount of \$40 to send a truck to pickup the car plus a cost \$2 for each mile the car is towed. Find the solution of $y = 2x + 40$ using 3 for x.

18. _____

19. The linear equation in two variables $y = 0.05x + 12.95$ models the total monthly charge, y, in dollars, for a long distance telephone customer who talked for x minutes long distance. The equation indicates that the customer is charged a fixed amount of \$12.95 per month plus a charge of \$0.05 for each minute of long distance. Find the solution of $y = 0.05x + 12.95$ using 205 for x.

19. _____

20. The linear equation in two variables $y = 500x + 2993$ models the altitude above sea level, y, in feet, of an airplane x minutes after taking off from a high plateau. The equation indicates that the airplane's altitude is initially 2993 feet above sea level and increases 500 feet each minute. Find a solution of $y = 500x + 2993$ using 2 for x.

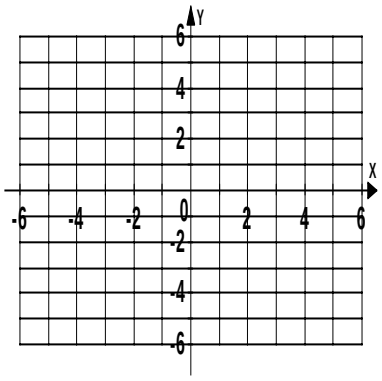
20. _____

Name _____ Date _____

Additional Exercises 4.1
Form III
Graphing Linear Equations in Two Variables

Plot the given points in a rectangular coordinate system and then state the quadrant in which each point lies.

1. (4, –1) 1. _____
2. (–2, –3) 2. _____
3. (3, 2) 3. _____
4. (2, –3) 4. _____
5. (–1, 4) 5. _____



Determine whether the ordered pair is a solution of the given equation.

6. $\left(-\frac{1}{2}, \frac{1}{4}\right)$ 6. _____
$x + 2y = 0$

7. (–4, 0) 7. _____
$x - 4 = 0$

8. (6, –4) 8. _____
$2x - 3y = 12$

Find the solution to the equation using the value given for *x*.

9. $y = \frac{2}{3}x \;;\; x = -4$ 9. _____

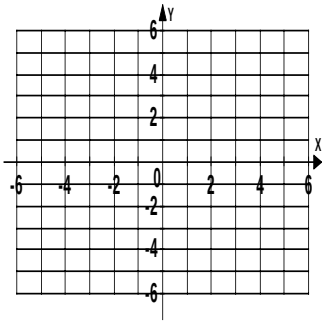
10. $y = \frac{1}{5}x \;;\; x = 5$ 10. _____

Name _____ Date _____

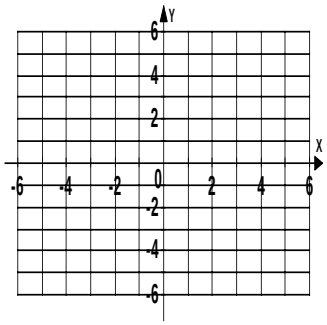
11. $y = -2x - 3$; $x = \frac{1}{2}$ 11. _____

Graph the linear equation in two variables.

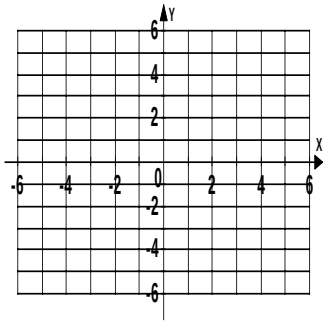
12. $y = \frac{1}{3}x - 2$ 12.



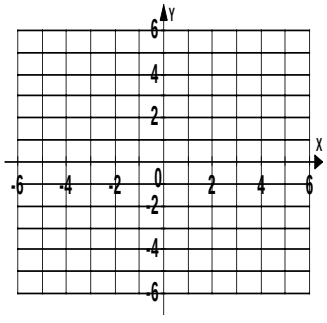
13. $y = -2$ 13.



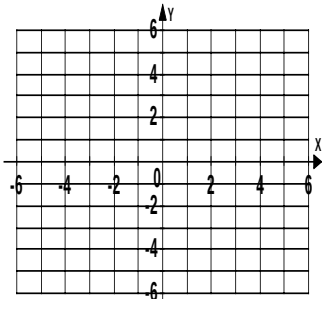
14. $y = -\frac{3}{2}x + 1$ 14.



15. $y = \frac{1}{4}x$ 15.

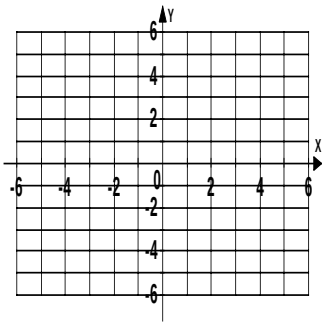


16. $y = -\frac{1}{2}x - 2$ 16.



Name _____ Date _____

17. $y = \frac{5}{2}x + 1$

17. 

Solve the problem.

18. The linear equation in two variables $y = 0.25x + 150$ models the total weekly cost, y, in dollars, for renting and driving it x miles. the equation indicates that the rental company charges a fixed amount of \$150 for the week plus a cost of \$0.25 for each mile the car is driven. Find the solution of $y = 0.25x + 150$ using 215 for x .

18. _____

19. The linear equation in two variables $y = 3x + 45$ models the total cost, y, in dollars, for towing a car x miles. The equation indicates that the towing company charges a fixed amount of \$45 to send a truck to pickup the car plus a cost \$3 for each mile the car is towed. Find the solution of $y = 3x + 45$ using 10 for x .

19. _____

20. The linear equation in two variables $y = 33.5x$ models the speed, y, in feet per second, of a ball dropped from a tower x seconds after it is dropped. The equation indicates that the speed of the ball increases by 33.5 feet per second for every second that passes. Find a solution of $y = 33.5x$ using 4 for x.

20. _____