

Chapters
1-4

STUDY GUIDE

Solve the equation.

1. $x + \frac{2}{3} = \frac{5}{6}$

2. $w - 8 = 12$

Solve the equation.

3. $6m = -72$

4. $\frac{n}{3} = 15$

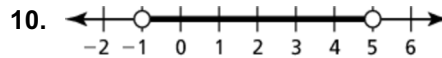
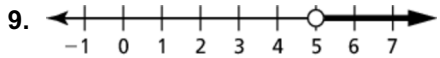
5. $5 + 2y = -13 + 2y$

6. $4h - 6 = 12$

7. $-4x = 32$

8. $3y = -15$

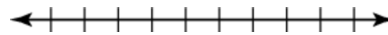
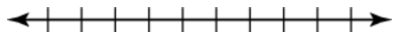
Write an inequality that represents the graph.



Solve the inequality. Graph the solution.

11. $x + 5 \leq -2$

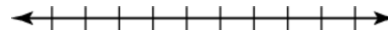
12. $4q > -28$



Solve the inequality. Graph the solution.

13. $5 + 2y < 8$ or $5y > 3y + 7$

14. $7 < 12 + c < 13$



Solve the inequality.

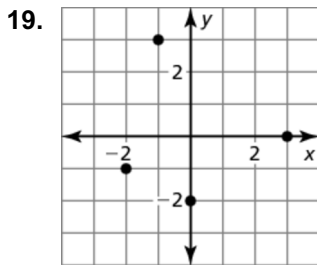
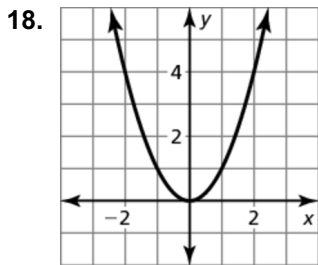
15. $\frac{p}{3} > -5$

Solve the inequality.

16. $|3x + 15| < 6$

17. $3 - |x + 8| \geq 5$

Find the domain and range of the function represented by the graph. Determine whether the domain is *discrete* or *continuous*.

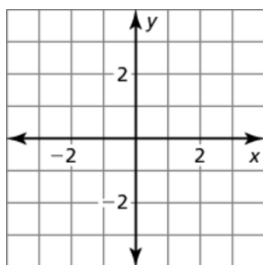


Evaluate the function when $x = -1, 0,$ and 4 .

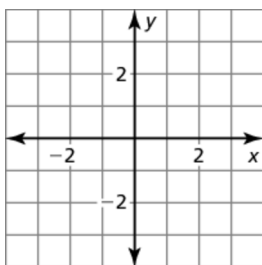
20. $g(x) = 3x^2 + 1$ 21. $b(x) = -2x - 4$ 22. $h(x) = |-x + 5|$

Graph the linear equation.

23. $x - 3y = 6$



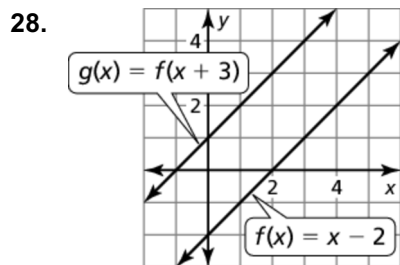
24. $y = -\frac{2}{3}x + 1$



Identify the slope, y-intercept, and x-intercept of the graph of the linear equation.

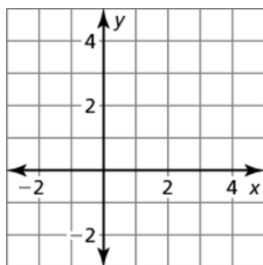
25. $5x + 3y = 15$ 26. $y = x - 3$ 27. $x = -4$

Use the graph of f and g to describe the transformation from the graph of f to the graph of g .



29. $f(x) = -x + 5; g(x) = 2f(x)$

30. Given $g(x) = -|x - 2| + 3$, (a) describe the transformation from the graph of $f(x) = |x|$ to the graph of g , and (b) graph g .



Write the slope-intercept form of the equation with the given characteristics.

31. slope = $\frac{1}{4}$; y-intercept = 2
32. slope = $-\frac{3}{2}$; passes through $(-4, 7)$
33. passes through $(-2, 1)$ and $(2, -5)$
34. parallel to the line $y = -3x + 5$; passes through $(-4, 5)$
35. perpendicular to the line $y = \frac{1}{2}x - 8$; passes through $(7, -6)$

Write the point-slope form of the equation with the given characteristics.

36. slope = 2; y-intercept = 3
37. slope = -2; passes through $(-3, 5)$
38. parallel to the line $y = \frac{3}{5}x - 8$; passes through $(0, -3)$
39. perpendicular to the line $y = -2x - 7$; passes through $(-3, 10)$

40. INTERPRETING FUNCTION NOTATION:

Let $c(t)$ be the number of customers in a restaurant t hours after 8 A.M. Explain the meaning of each statement.

- a. $c(0) = 0$
- b. $c(3) = c(8)$
- c. $c(n) = 29$
- d. $c(13) < c(12)$

41. You are looking at ads for a new bicycle. The price you want to pay is \$200 with an absolute deviation of at most \$25. Write and solve an absolute value inequality that represents the price you want to pay