Chapter 3 ■ Skills Practice

Lesson 3-1

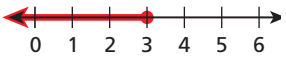
Describe the solutions of each inequality in words.

1. $3 + v < -2$ **2.** $15 \leq k + 4$ **3.** $-3 + n > 6$ **4.** $1 - 4x \geq -2$

Graph each inequality.

5. $f \geq 2$ **6.** $m < -1$ **7.** $\sqrt{4^2 + 3^2} > c$ **8.** $(-1 - 1)^2 \leq p$

Write the inequality shown by each graph.

9.


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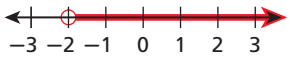


11.


12.


13.


14.


Write each inequality with the variable on the left. Graph the solutions.

15. $14 > b$ **16.** $9 \leq g$ **17.** $-2 < x$ **18.** $-4 \geq k$

Lesson 3-2

Solve each inequality and graph the solutions.

19. $8 \geq d - 4$ **20.** $-5 < 10 + w$ **21.** $a + 4 \leq 7$ **22.** $9 + j > 2$

Write an inequality to represent each statement. Solve the inequality and graph the solutions.

23. Five more than a number v is less than or equal to 9.

24. A number t decreased by 2 is at least 7.

25. Three less than a number r is less than -1.

26. A number k increased by 1 is at most -2.

Use the inequality $4 + z \leq 11$ to fill in the missing numbers.

27. $z \leq$ ▢ **28.** $z -$ ▢ ≤ 4 **29.** $z - 3 \leq$ ▢

Lesson 3-3

Solve each inequality and graph the solutions.

30. $24 > 4b$ **31.** $27g \leq 81$ **32.** $\frac{x}{5} < 3$ **33.** $10y \geq 2$

34. $4p < -2$ **35.** $\frac{3s}{8} > 3$ **36.** $0 \geq \frac{3}{7}d$ **37.** $\frac{a}{8} \geq \frac{3}{4}$

38. $-3k \leq -12$ **39.** $\frac{-2e}{5} \geq 4$ **40.** $8 < -12y$ **41.** $-3.5 > 14c$

42. $9 > \frac{h}{-2}$ **43.** $49 > -7m$ **44.** $60 \leq -12c$ **45.** $-\frac{1}{3}q < -6$

Write an inequality for each statement. Solve the inequality and graph the solutions.

46. The product of $\frac{1}{2}$ and a number is not more than 6.

47. The quotient of r and -5 is greater than 3.

48. The product of -11 and a number is greater than -33.

49. The quotient of w and -4 is less than or equal to -6.

Lesson 3-4

Solve each inequality and graph the solutions.

50. $3t - 2 < 5$ **51.** $4p + 4 \geq 12$ **52.** $10 > 4 - 3g$ **53.** $-6 < 5b - 4$

54. $\frac{m-2}{4} < -2$ **55.** $-1 > \frac{10x-4}{12}$ **56.** $9a + 6 \geq 3$ **57.** $4 < \frac{2f+3}{2}$

58. $10 \leq 3(4 - r)$ **59.** $\frac{2}{3} + \frac{3}{4}h < \frac{4}{3}$ **60.** $\frac{1}{5}(10k - 2) > 1$

61. $-n - 3 < -2^3$ **62.** $37 - 4d \leq \sqrt{3^2 + 4^2}$ **63.** $-\frac{3}{4}(8q - 2^2) < -3$

Use the inequality $-6 - 2w \geq 10$ to fill in the missing numbers.

64. $w \leq$ ▢ **65.** $w - 3 \leq$ ▢ **66.** ▢ $+ w \leq 1$

Write an inequality for each statement. Solve the inequality and graph the solutions.

67. Twelve is less than or equal to the product of 6 and the difference of 5 and a number.

68. The difference of one-third a number and 8 is more than -4.

69. Seven more than a number is less than or equal to the square root of the sum of 9 and 7.

70. One-fourth of the sum of $2x$ and 4 is more than 5.

Lesson 3-5

Solve each inequality and graph the solutions.

71. $4v - 2 \leq 3v$ **72.** $9e > 7 - 2e$

73. $6j \geq 2j + 8$ **74.** $3z - 5 < 7z$

75. $2(7 - s) > 4(s + 2)$ **76.** $-3(3 + 2y) - 1 \leq 2(1 - 4y)$

77. $3n < 3(6 - 2n)$ **78.** $\frac{1}{3}u - \frac{5}{2} \geq \frac{1}{6}u$

Solve each inequality.

79. $3 + 3c < 6 + 3c$ **80.** $4(k + 2) \geq 4k + 5$ **81.** $2(5 - b) \leq 3 - 2b$

Write an inequality to represent each relationship. Solve your inequality.

82. The difference of three times a number and 5 is more than the number times 4.

83. Seven more than the product of four and a number is less than or equal to the number increased by 3.

84. one less than a number is greater than the product of 3 and the difference of 5 and the number.

Lesson 3-6

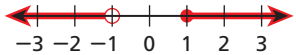
Solve each compound inequality and graph the solutions.

85. $6 < 3 + x < -8$ **86.** $-1 \leq b + 4 \leq 3$

87. $k + 5 \leq -3$ OR $k + 5 \geq 1$ **88.** $r - 3 > 2$ OR $r + 1 < 4$

Write the compound inequality shown by each graph.

89.



90.

Write and graph a compound inequality for the numbers described.

91. all real numbers less than 2 and greater than or equal to -1

92. all real numbers between -3 and 1

Solve each compound inequality and graph the solutions.

93. $2r + 3 \geq 1$ AND $3r - 4 \leq 5$ **94.** $f - 2 > 6$ OR $f + 2 < 6$