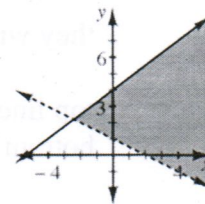


Lesson 11.1.5

- 11-53. a. 4 b. 3 c. 1 d. 2 e. 6 f. 5
- 11-54. (1) D: $-\infty < x < \infty$, R: $-\infty < y < \infty$; (2) D: $-4 \leq x \leq 0$, R: $0 \leq y \leq 2$;
 (3) D: all x -values except $x = 0$, R: all y -values except $y = 1$; (4) D: $x \geq 3$,
 R: $y \geq 0$; (5) D: $-\infty < x < \infty$, R: $y > 0$; (6) D: all x -values except $x = 0$, R: $y > 0$
- 11-55. They are the same shape, but one is shifted up two units.
- 11-56. $\frac{3x-4}{2x+1}$; $x \neq -0.5$ or -5 11-57. a. 8 b. 1 c. -2 d. no solution
- 11-58. $y = 5x - 22$ 11-59. a. 9 b. $\frac{14}{3}$ c. $\frac{13}{5} = 2.6$ d. 7
- 11-60. a. $15x^3y$ b. y c. x^5 d. $\frac{8}{x^3}$ 11-61. a. 2 b. 53
- 11-62. a. $-4 \leq x \leq 4$ b. $0 < x < 3$ c. $1 < x \leq 6$ d. $-5 \leq x < -4$
- 11-63. Graphs (a) and (b) have a domain of $-\infty < x < \infty$, while graphs (a) and (c) have a range of $-\infty < y < \infty$.
- 11-64. a. $x = \pm 4$ b. $(-5, -17)$ c. $x = 4$ or $x = -2$
 d. $x = \frac{-1 \pm \sqrt{57}}{4}$. 1.64 or -2.14
- 11-65. See graph at right.



Lesson 11.1.6

- 11-68. a. $y = \sqrt{x-3} + 2$ b. $y = -|x+5| + 4$
- 11-69. a. D: the set of non-negative numbers; R: the set of non-negative numbers.
 b. D: $x \geq -2$; R: $y \geq -3$. c. The domain and range are each shifted along with the graph.
- 11-70. a. 3 b. 1 c. 2
- 11-71. x . $(0, 0)$ and $(4, 0)$, y . $(0, 0)$, vertex. $(2, 4)$
- 11-72. a. 12 b. 59 c. 7 d. 9 e. -13 f. -5
- 11-73. All equations are equivalent and have the same solution. $x = 4$.
- 11-74. a. $12x^2 + 5x - 2$ b. $3m^2 + m - 2$ c. $-5k^2 + 26k - 24$
- 11-75. a. $x \leq 12$ b. $-10 < x < 10$ c. $x < 0$ d. $x < -5$, $x > 1$