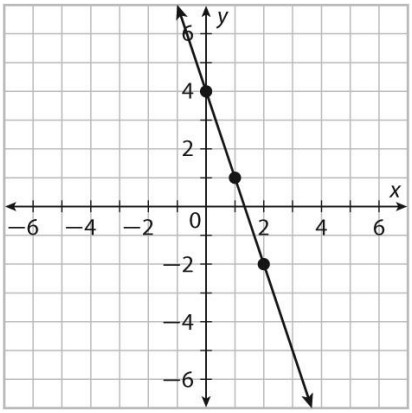
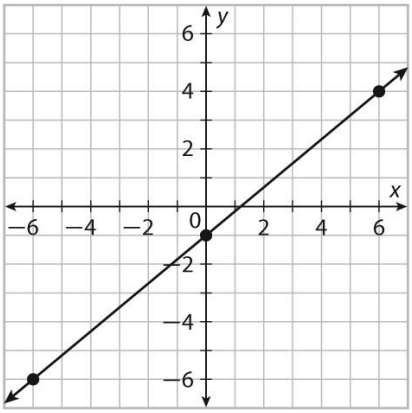
MODULE 6 Forms of Linear Equations

LESSON 6-1

Practice and Problem Solving: A/B

1. $y = -4x + 7$; slope: -4; y-intercept: 7
2. $y = \frac{2}{3}x - 3$; slope: $\frac{2}{3}$; y-intercept: -3
3. $y = \frac{5}{4}x - \frac{3}{2}$; slope: $\frac{5}{4}$; y-intercept: $-\frac{3}{2}$
4. $y = -\frac{1}{2}x + 4$; slope: $-\frac{1}{2}$; y-intercept: 4
5. 

6. 

7. slope is 3, y-intercept is -5
8. $y = 0.25x - 11$
9. $f(x) = 30{,}000 - 500x$

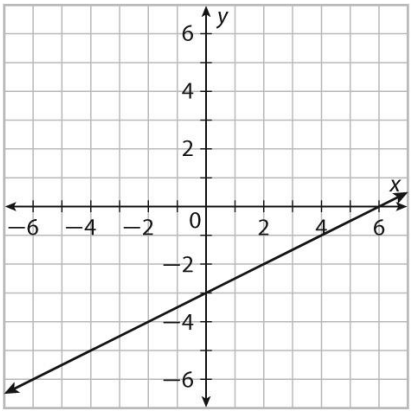
LESSON 6-2

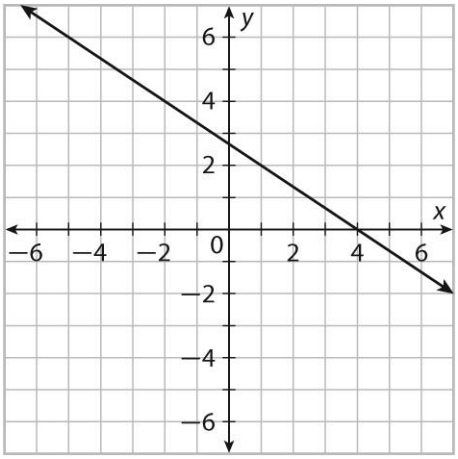
Practice and Problem Solving: A/B

1. $y - 5 = 2\,(x - 3)$
2. $y - 7 = -3\,(x + 1)$
3. $y - 3 = 0(x - 4)$; or $y - 3 = 0(x + 10)$
4. $y - 2 = \frac{2}{5}(x - 5)$; or $y = \frac{2}{5}(x)$
5. $y = \frac{9}{2}(x)$; or $y - 9 = \frac{9}{2}(x - 2)$; or $y - 18 = \frac{9}{2}(x - 4)$
6. $y - 18 = -\frac{9}{3}(x + 2)$; or $y - 9 = -\frac{9}{3}(x + 1)$; or $y = -\frac{9}{3}(x - 4)$
7. $y - 5 = -\frac{1}{2}(x)$; or $y - 3 = \frac{-1}{2}(x - 4)$
8. $y + 3 = \frac{1}{6}(x)$; or $y + 2 = \frac{1}{6}(x - 6)$
9. $y - 400 = 50\,(x - 4)$; \$700

LESSON 6-3

Practice and Problem Solving: A/B

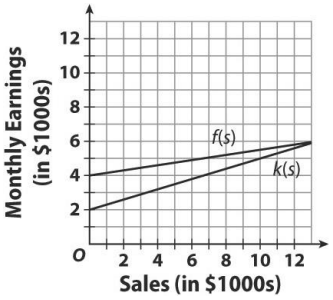
1. not standard; $3x - y = 0$
2. not standard; $5x + y = -4$
3. not standard; $2x + 2y = 8$
4. $6x - y = 11$
5. $x + y = 7$
6. $9x - y = -47$
7. 

8. 

9. $200x - y = -50$
10. $x - 4y = -4$

LESSON 6-4

Practice and Problem Solving: A/B

1. $y = 6x + 11$
2. $y = -5x - 1$
3. $y = 2x - 4$
4. $y = 6x - 1$
5. $y = x - 1$
6. $y = 2x$
7. $y = 3x - 1$
8. $y = 4x + 2$
9. $g(s) = 4000 + 0.05s$
10. $h(s) = 8000 + 0.15s$
11. $k(s) = 2000 + 0.3s$
12. 

LESSON 6-5

Practice and Problem Solving: A/B

1. $2 \le x \le 9$
2. $1 \le x \le 8$
3. $1 \le y \le 10$
4. $0 \le g(x) \le 35$
5. $f(2) = 1$
6. $g(1) = 35$
7. $\frac{9}{7}$
8. -5
9. Possible answer: The graphs are not alike at all. They have a different slope, different initial values and different domain and ranges.
10. Possible answer: The temperature from 2 o'clock to 9 o'clock rose from 1 to 10 degrees at a rate of $\frac{9}{7}$ degrees per hour.
11. Possible answer: A tank has 35 gallons of water at 1 o'clock. The tank loses 5 gallons each hour until there is no water left.
12. $f(x)$ would have y-intercept of $\frac{-11}{7}$ and $g(x)$ would have y-intercept of 40.