Practice Exercises

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. $m = 3,\ b = 2$
2. $m = \frac{3}{2},\ b = -5$
3. $m = -6,\ b = -3$
4. $m = -1,\ b = \frac{1}{2}$
5. $m = \frac{7}{2},\ b = \frac{3}{2}$

B. Find the equation of the line of the form $y = mx + b$ given the slope and a point.

1. $m = 2;\ (0, 4)$
2. $m = -5;\ (-3, 9)$
3. $m = -1;\ (7, 2)$

4. $m = \frac{2}{3}$; (0, 8)

5. $m = -\frac{7}{4}$; (-2, 8)

C. Find the equation of the line of the form $y = mx + b$ that passes through the following pairs of points.

1. (3, 4) and (4, 7)
2. (3, -1) and (7, -5)
3. (-1, 10) and (0, 15)
4. $\left(\frac{7}{2}, 1\right)$ and $\left(-\frac{1}{2}, 2\right)$
5. $\left(-\frac{1}{2}, \frac{1}{3}\right)$ and $(2, 3)$

D. Write the equation of the line with the given x-intercept and y-intercept.

1. $a = 2; b = -3$
2. $a = -5; b = 8$

3. $a = -2; b = 6$

4. $(0, -2); (1, 0)$

5. $(0, 1); (3, 0)$

Problem Set

A. Write the equation of the line in standard form given the slope and the y-intercept.

1. $m = -2,\ b = 3$
2. $m = \frac{2}{3},\ b = -3$
3. $m = -5,\ b = -1$
4. $m = -3,\ b = \frac{3}{2}$
5. $m = \frac{6}{5},\ b = \frac{4}{3}$

B. Find the equation of the line of the form $y = mx + b$ given the slope and a point.

1. $m = -2;\ (3, 0)$
2. $m = 4;\ (-2, 7)$
3. $m = 3;\ (6, 4)$

4. $m = \frac{3}{2}$; (1, 7)

5. $m = -\frac{3}{4}$; (-1, 6)

C. Find the equation of the line of the form $y = mx + b$ that passes through the following pairs of points.

1. (2, 3) and (5, 8)
2. (2, -3) and (6, -3)
3. (-2, 9) and (0, 10)
4. $\left(\frac{1}{2}, 2\right)$ and $\left(-\frac{3}{2}, 1\right)$
5. $\left(-\frac{1}{3}, \frac{3}{2}\right)$ and $(1, 2)$

D. Write the equation of the line with the given x-intercept and y-intercept.

1. $a = 1; b = 5$
2. $a = 3; b = -4$
3. $(3,0); (0,3)$
4. $(-5,0); (0,-4)$
5. $(-6,0); (0,2)$