

# Practice 3-5

## Lines in the Coordinate Plane

Write an equation of the line with the given slope that contains the given point.

1.  $F(3, -6)$ , slope  $\frac{1}{3}$
2.  $Q(5, 2)$ , slope  $-2$
3.  $A(3, 3)$ , slope  $7$
4.  $B(-4, -1)$ , slope  $-\frac{1}{2}$
5.  $L(-3, -2)$ , slope  $\frac{1}{6}$
6.  $R(15, 10)$ , slope  $\frac{4}{5}$
7.  $D(1, -9)$ , slope  $4$
8.  $W(0, 6)$ , slope  $-1$

Graph each line using slope-intercept form.

9.  $2y = 8x - 2$
10.  $2y = \frac{1}{2}x - 10$
11.  $3x + 9y = 18$
12.  $-x + y = -1$
13.  $y + 7 = 2x$
14.  $4x - 2y = 6$
15.  $5 - y = \frac{3}{4}x$
16.  $\frac{1}{3}x = \frac{1}{2}y - 1$

Graph each line.

17.  $y = 5x + 4$
18.  $y = \frac{1}{2}x - 3$
19.  $x = -2$
20.  $y = -2x$
21.  $y = -5$
22.  $y = x$
23.  $y = -\frac{2}{3}x + 2$
24.  $x = 2.5$

Write an equation of the line containing the given points.

25.  $A(2, 7), B(3, 4)$
26.  $P(-1, 3), Q(0, 4)$
27.  $S(10, 2), T(2, -2)$
28.  $D(7, -4), E(-5, 2)$
29.  $G(-2, 0), H(3, 10)$
30.  $B(3, 5), C(-6, 2)$
31.  $X(-1, -1), Y(4, -2)$
32.  $M(8, -3), N(7, 3)$

Write equations for (a) the horizontal line and (b) the vertical line that contain the given point.

33.  $Z(2, -11)$
34.  $D(0, 2)$
35.  $R(-4, -4)$
36.  $F(-1, 8)$

Graph each line using intercepts.

37.  $3x - y = 12$
38.  $2x + 4y = -4$
39.  $\frac{1}{2}x + \frac{1}{2}y = 3$
40.  $12x - 3y = -6$
41.  $2x - 2y = 8$
42.  $\frac{1}{4}x + 2y = 2$
43.  $-6x + 1.5y = 18$
44.  $0.2x + 0.3y = 1.8$

**45. Hourly Wages** The equation  $P = \$3.90 + \$0.10x$  represents the hourly pay ( $P$ ) a worker receives for loading  $x$  number of boxes onto a truck.

- a. What is the slope of the line represented by the given equation?
- b. What does the slope represent in this situation?
- c. What is the  $y$ -intercept of the line?
- d. What does the  $y$ -intercept represent in this situation?

**46. Inclines** The Blackberrys' driveway is difficult to get up in the winter ice and snow because of its slope. What is the equation of the line that represents the Blackberrys' driveway?

