Name _____ Class _____ Date _____

Practice 3-6

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?