Write an equation of the line that has the given slope and y-intercept.

1.
$$m = 3, b = -4$$

2.
$$m = -4, b = 0$$

3.
$$m = 0, b = -5$$

Write an equation of the line that passes through the given point and has the given slope.

4.
$$(4,3), m=1$$

5.
$$(-1, 1), m = -2$$
 6. $(12, 4), m = 0$

6.
$$(12, 4), m = 0$$

7.
$$\left(\frac{2}{3}, 1\right), m = -3$$

8.
$$\left(-2,\frac{1}{2}\right), m=8$$

7.
$$\left(\frac{2}{3}, 1\right), m = -3$$
 8. $\left(-2, \frac{1}{2}\right), m = 8$ **9.** $\left(\frac{3}{5}, 0\right), m = -5$

Write an equation of the line that passes through the given point and satisfies the given condition.

10.
$$(-2, 3)$$
; parallel to $y = 4x - 3$

11. (3, 7); parallel to
$$y = -3x + 6$$

12.
$$(-1, -4)$$
; perpendicular to $y = 2x + 5$

12.
$$(-1, -4)$$
; perpendicular to $y = 2x + 5$ **13.** $(6, -2)$; perpendicular to $y = -5x - 7$

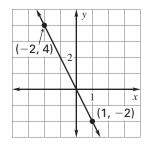
Write an equation of the line that passes through the given points.

15.
$$(-3, -3), (2, 1)$$

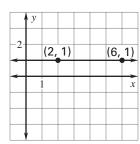
16.
$$(-5, -4), (0, 11)$$

Write an equation of the line.

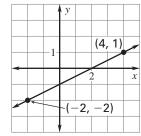
20.



21.



22.



23. Video Store The membership to your local video store is \$10 per year and the DVD rental rate is \$3.95 per DVD. Write an equation that models the total amount of money you will spend on DVD rentals this year.

In Exercises 24 and 25, use the following information.

Postal Rates The price for U.S. postage stamps has increased over the years. Since 1975, the price has increased from \$.13 to \$.37 in 2005 at a rate that is approximately linear.

- **24.** Write a linear model for the price of stamps during this time period. Let p represent the price and t represent the number of years since 1975.
- **25.** What would you expect the price of a stamp to be in 2015?