

## Writing Linear Equations

Write the slope-intercept form of the equation of each line.

1)  $3x - 2y = -16$

$$y = \frac{3}{2}x + 8$$

2)  $13x - 11y = -12$

$$y = \frac{13}{11}x + \frac{12}{11}$$

3)  $9x - 7y = -7$

$$y = \frac{9}{7}x + 1$$

4)  $x - 3y = 6$

$$y = \frac{1}{3}x - 2$$

5)  $6x + 5y = -15$

$$y = -\frac{6}{5}x - 3$$

6)  $4x - y = 1$

$$y = 4x - 1$$

7)  $11x - 4y = 32$

$$y = \frac{11}{4}x - 8$$

8)  $11x - 8y = -48$

$$y = \frac{11}{8}x + 6$$

Write the standard form of the equation of the line through the given point with the given slope.

9) through:  $(1, 2)$ , slope = 7

$$7x - y = 5$$

10) through:  $(3, -1)$ , slope = -1

$$x + y = 2$$

11) through:  $(-2, 5)$ , slope = -4

$$4x + y = -3$$

12) through:  $(3, 5)$ , slope =  $\frac{5}{3}$

$$5x - 3y = 0$$

13) through:  $(2, -4)$ , slope =  $-1$

$$x + y = -2$$

14) through:  $(2, 5)$ , slope = undefined

$$x = 2$$

15) through:  $(3, 1)$ , slope =  $\frac{1}{2}$

$$x - 2y = 1$$

16) through:  $(-1, 2)$ , slope =  $2$

$$2x - y = -4$$

**Write the point-slope form of the equation of the line described.**

17) through:  $(4, 2)$ , parallel to  $y = -\frac{3}{4}x - 5$

$$y - 2 = -\frac{3}{4}(x - 4)$$

18) through:  $(-3, -3)$ , parallel to  $y = \frac{7}{3}x + 3$

$$y + 3 = \frac{7}{3}(x + 3)$$

19) through:  $(-4, 0)$ , parallel to  $y = \frac{3}{4}x - 2$

$$y = \frac{3}{4}(x + 4)$$

20) through:  $(-1, 4)$ , parallel to  $y = -5x + 2$

$$y - 4 = -5(x + 1)$$

21) through:  $(2, 0)$ , parallel to  $y = \frac{1}{3}x + 3$

$$y = \frac{1}{3}(x - 2)$$

22) through:  $(4, -4)$ , parallel to  $y = -x - 4$

$$y + 4 = -(x - 4)$$

23) through:  $(-2, 4)$ , parallel to  $y = -\frac{5}{2}x + 5$

$$y - 4 = -\frac{5}{2}(x + 2)$$

24) through:  $(-4, -1)$ , parallel to  $y = -\frac{1}{2}x - 1$

$$y + 1 = -\frac{1}{2}(x + 4)$$