

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

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