

**Writing Equations of Parallel and Perpendicular Lines**

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

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

2) through:  $(4, 3)$ , parallel to  $x = 0$

3) through:  $(2, -4)$ , parallel to  $y = 3x + 2$

4) through:  $(2, -1)$ , parallel to  $y = -\frac{2}{5}x + 3$

5) through:  $(1, -5)$ , perp. to  $y = \frac{1}{8}x + 2$

6) through:  $(4, -1)$ , perp. to  $y = x + 2$

7) through:  $(-5, 5)$ , perp. to  $y = \frac{5}{9}x - 4$

8) through:  $(3, 4)$ , perp. to  $y = -2x - 4$

**Write the standard form of the equation of the line described.**

9) through:  $(4, 4)$ , parallel to  $y = -6x + 5$

10) through:  $(-5, 5)$ , parallel to  $y = -3x + 3$

11) through:  $(3, -2)$ , perp. to  $y = 5x + 4$

12) through:  $(3, 1)$ , perp. to  $y = -\frac{2}{3}x + 4$

**Write the standard form of the equation of each line.**

13)  $y = 3x + 1$

14)  $y = -\frac{9}{5}x + 3$

$$15) \text{ Slope} = 1, \text{ y-intercept} = 0$$

$$16) \text{ Slope} = -\frac{7}{2}, \text{ y-intercept} = 2$$

$$17) y - 1 = -\frac{1}{3}(x + 3)$$

$$18) y - 4 = -\frac{6}{5}(x + 5)$$

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

$$19) y - 1 = 2(x - 2)$$

$$20) y + 3 = \frac{1}{2}(x + 2)$$

# Answers to Writing Equations of Parallel and Perpendicular Lines (ID: 1)

1)  $y = x$

2)  $x = 4$

3)  $y = 3x - 10$

4)  $y = -\frac{2}{5}x - \frac{1}{5}$

5)  $y = -8x + 3$

6)  $y = -x + 3$

7)  $y = -\frac{9}{5}x - 4$

8)  $y = \frac{1}{2}x + \frac{5}{2}$

9)  $6x + y = 28$

10)  $3x + y = -10$

11)  $x + 5y = -7$

12)  $3x - 2y = 7$

13)  $3x - y = -1$

14)  $9x + 5y = 15$

15)  $x - y = 0$

16)  $7x + 2y = 4$

17)  $x + 3y = 0$

18)  $6x + 5y = -10$

19)  $y = 2x - 3$

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