Algebra 1 Name_____

Writing Equations of Parallel and Perpendicular Lines

Period____

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) Slope = 1, y-intercept = 0

16) Slope = $-\frac{7}{2}$, 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) $y = \frac{1}{2}x - 2$