Algebra 2 Name_____

Writing Linear Equations

Write the slope-intercept form of the equation of each line given the slope and y-intercept.

1) Slope $= -\frac{5}{2}$, y-intercept $= 2$

2) Slope $= -\frac{1}{2}$, y-intercept $= 2$

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

3) through: $(-5, 0)$, slope $= -\frac{3}{5}$

4) through: $(3, 5)$, slope $= \frac{8}{3}$

5) through: $(-3, -4)$, slope $= \frac{8}{3}$

6) through: $(4, -4)$, slope $= -\frac{1}{2}$

Write the slope-intercept form of the equation of the line through the given points.

7) through: $(0, -1)$ and $(-5, -5)$

8) through: $(5, 4)$ and $(2, -3)$

9) through: $(4, 2)$ and $(0, -5)$

10) through: $(1, 2)$ and $(3, 4)$

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

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

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

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

14) through: $(4, 5)$, parallel to $y = \frac{9}{4}x$

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

16) through: $(-5, 0)$, perp. to $y = -\frac{5}{4}x - 1$

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

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

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

19) through: $(3, -5)$, slope $= -\frac{3}{2}$

20) through: $(4, 0)$, slope $= -\frac{5}{6}$

21) through: $(-5, -3)$, slope $= \frac{2}{5}$

22) through: $(-4, 4)$, slope $= -\frac{9}{7}$

Write the point-slope form of the equation of the line through the given points.

23) through: $(4, -2)$ and $(-4, -5)$

24) through: $(2, 5)$ and $(-4, 3)$

25) through: $(-3, -4)$ and $(-2, 2)$

26) through: $(4, 1)$ and $(3, 2)$