Name _____ Class _____ Date _____

Write an equation of the line with the given slope that contains the given point.

1. $F(3,-6)$, slope $\dfrac{1}{3}$

Graph each line. (Use graph paper or your Ipad)

18. $y = \dfrac{1}{2}x - 3$ **19.** $x = -2$ **21.** $y = -5$

Write an equation of the line containing the given points.

25. $A(2, 7)$, $B(3, 4)$

Write equations for (a) the horizontal line and (b) the vertical line that contain the given point.

33. $Z(2,-11)$

45. Hourly Wages The equation $P = \$3.90 + \$0.10x$ represents the hourly pay (P) a worker receives for loading x number of boxes onto a truck.

    a. What is the slope of the line represented by the given equation?

    b. What does the slope represent in this situation?

    c. What is the y-intercept of the line?

    d. What does the y-intercept represent in this situation?

Write an equation for the line _perpendicular_ to $\overleftrightarrow{XY}$ that contains point Z.

16. $\overleftrightarrow{XY} : y = \dfrac{3}{4}x + 22$, $Z(12,8)$

Write an equation for the line _parallel_ to $\overleftrightarrow{XY}$ that contains point Z.

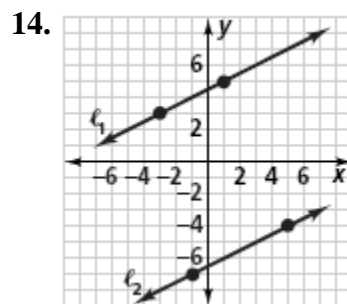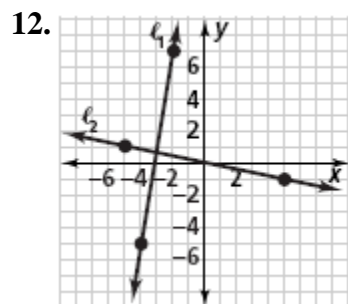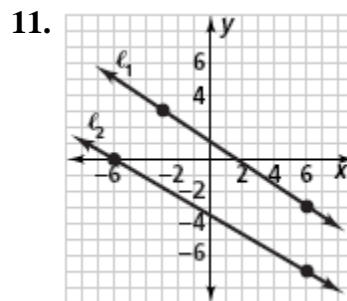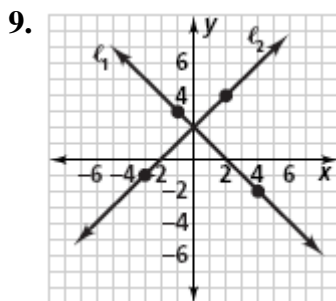**18.** $\overleftrightarrow{XY} : 6x - 10y + 5 = 0$, $Z(-5, 3)$

Are the lines parallel, perpendicular, or neither? Explain.

1. $y = 3x - 2$

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

2. $y = \frac{1}{2}x + 1$

$-4y = 8x + 3$

3. $\frac{2}{3}x + y = 4$

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

4. $-x - y = -1$

$y + x = 7$

Are lines l_1 and l_2 parallel, perpendicular, or neither? Explain.

9.

11.

12.

14.

Write an equation for the line perpendicular to $\overleftrightarrow{XY}$ that contains point Z.

15. $\overleftrightarrow{XY}: 3x + 2y = -6$, $Z(3,2)$

16. $\overleftrightarrow{XY}: y = \frac{3}{4}x + 22$, $Z(12,8)$

17. $\overleftrightarrow{XY}: -x + y = 0$, $Z(-2,-1)$

Write an equation for the line parallel to $\overleftrightarrow{XY}$ that contains point Z.

18. $\overleftrightarrow{XY}: 6x - 10y + 5 = 0$, $Z(-5, 3)$ **19.** $\overleftrightarrow{XY}: y = -1$, $Z(0, 0)$

20. $\overleftrightarrow{XY}: x = \frac{1}{2}y + 1$, $Z(1,-2)$