Name _____ Class _____ Date _____

Practice 3-6

Lines in the Coordinate Plane

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

1. $F(3, -6)$, slope $\frac{1}{3}$ **2.** $Q(5, 2)$, slope -2 **3.** $A(3, 3)$, slope 7 **4.** $B(-4, -1)$, slope $-\frac{1}{2}$

5. $L(-3, -2)$, slope $\frac{1}{6}$ **6.** $R(15, 10)$, slope $\frac{4}{5}$ **7.** $D(1, -9)$, slope 4 **8.** $W(0, 6)$, slope -1

Graph each line using slope-intercept form.

9. $2y = 8x - 2$ **10.** $2y = \frac{1}{2}x - 10$ **11.** $3x + 9y = 18$ **12.** $-x + y = -1$

13. $y + 7 = 2x$ **14.** $4x - 2y = 6$ **15.** $5 - y = \frac{3}{4}x$ **16.** $\frac{1}{3}x = \frac{1}{2}y - 1$

Graph each line.

17. $y=5x+4$ **18.** $y=\frac{1}{2}x-3$ **19.** $x=-2$ **20.** $y=-2x$

21. $y=-5$ **22.** $y=x$ **23.** $y=-\frac{2}{3}x+2$ **24.** $x=2.5$

Write an equation of the line containing the given points.

25. $A(2, 7)$, $B(3, 4)$ **26.** $P(-1, 3)$, $Q(0, 4)$ **27.** $S(10, 2)$, $T(2, -2)$ **28.** $D(7, -4)$, $E(-5, 2)$

29. $G(-2, 0)$, $H(3, 10)$ **30.** $B(3, 5)$, $C(-6, 2)$ **31.** $X(-1, -1)$, $Y(4, -2)$ **32.** $M(8, -3)$, $N(7, 3)$

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

33. $Z(2, -11)$ **34.** $D(0, 2)$ **35.** $R(-4, -4)$ **36.** $F(-1, 8)$

Graph each line using intercepts.

37. $3x - y = 12$ **38.** $2x + 4y = -4$ **39.** $\frac{1}{2}x + \frac{1}{2}y = 3$ **40.** $12x - 3y = -6$

41. $2x - 2y = 8$ **42.** $\frac{1}{4}x + 2y = 2$ **43.** $-6x + 1.5y = 18$ **44.** $0.2x + 0.3y = 1.8$

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.

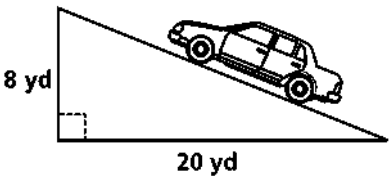
a. What is the slope of the line represented by the given equation?

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?

46. **Inclines** The Blackberrys' driveway is difficult to get up in the winter ice and snow because of its slope. What is the equation of the line that represents the Blackberrys' driveway?



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