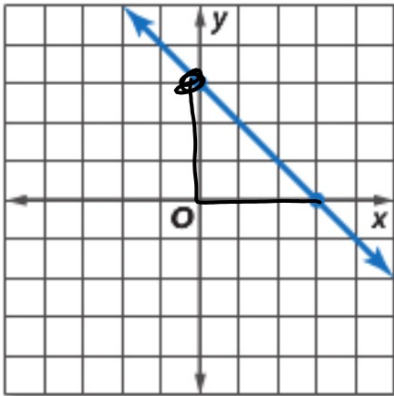Algebra 1 Ch. 3 Review

Quiz 3.6 moves to Thurs.

Ch. 3 (test is Mon.)

Whiteboards   .

3.

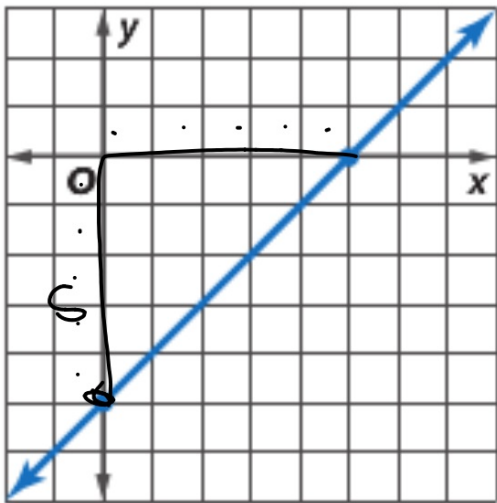Proportional? no
Write the equation
Function notation

$$y = mx + B$$

$$= \frac{-3}{3}x + 3$$

$$f(x) = -x + 3$$

$$y =$$

2.

$r, 0$

$$y = mx + B$$

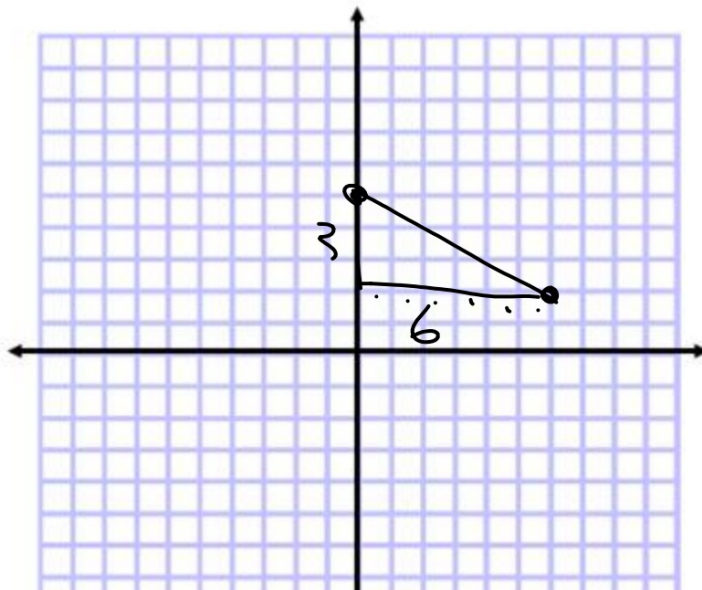$$\frac{S}{S}x - S$$

$$f(x) = x - S$$

$$y = x - S$$

$m =$

Find the slope of the line that passes through each pair of points.

29. $(0, 5), (6, 2)$

$\dfrac{-3}{t} = -\dfrac{1}{2}$

30. $(-6, 4), (-6, -2)$

Graph each equation.

13. $y = -x + 2$

14. $x + 5y = 4$

$x + 0 = 4$

$0 + 5y = 4$

$\dfrac{5y}{5} = \dfrac{4}{5}$

$\dfrac{-1}{1}$

$(4, 0)$

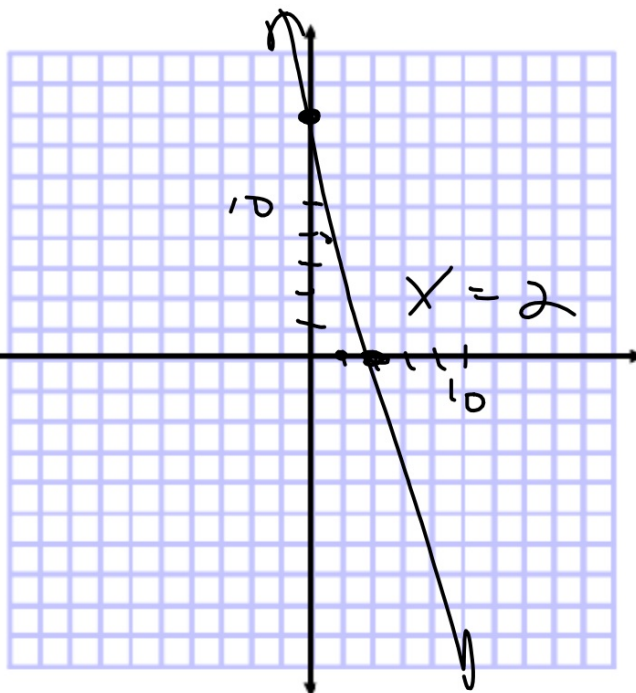$(0, 0.8)$
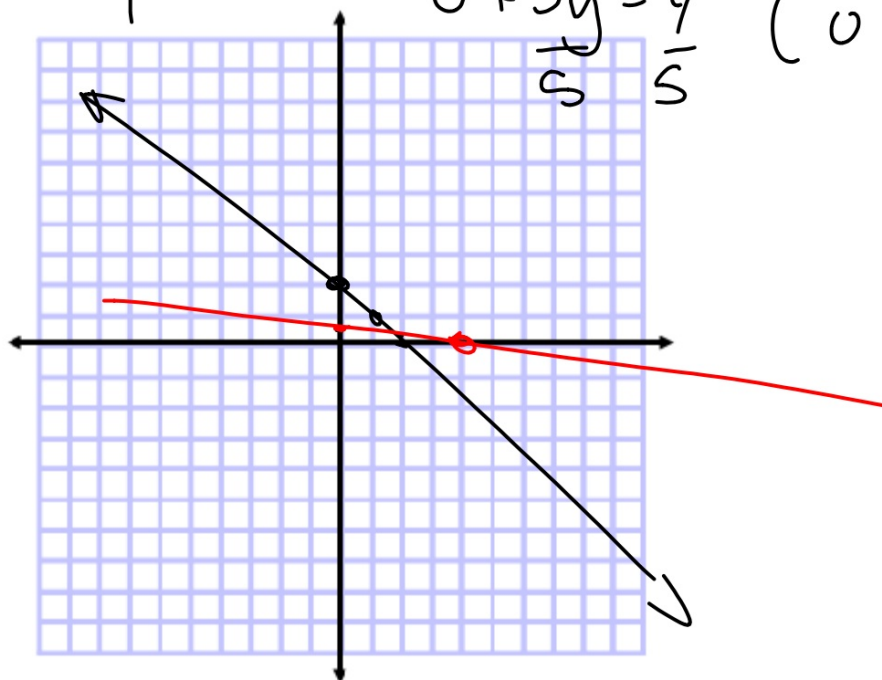
Solve each equation by graphing.

22. $0 = 16 - 8x$

23. $0 = 21 + 3x$

$$y = 16 - 8x$$

$$y = \frac{-8x + 16}{1}$$

$$x = 2$$

Where does it cross the x-axis?

$$0 = 16 - 8x$$
$$+8x \qquad +8x$$
$$\overline{\qquad\qquad\qquad}$$
$$\frac{8x}{8} = \frac{16}{8} \qquad x = 2$$

$x = 2$

24. $-4x - 28 = 0$ **25.** $25x - 225 = 0$

26. FUNDRAISING Sean's class is selling boxes of popcorn to raise money for a class trip. Sean's class paid $85 for the popcorn, and they are selling each box for $1. The function $y = |x - 85$ represents their profit y for each box of popcorn sold x. Find the zero and describe what it means in this situation.

$$y = x - 85$$

$$0 = x - 85$$
$$+85 \quad\quad +85$$
$$\overline{\quad\quad\quad\quad\quad}$$
$$85 = x$$

$$25x + \boxed{225} = 0$$
$$+225 \quad\quad +225$$
$$\overline{\quad\quad\quad\quad\quad\quad}$$
$$\frac{25x}{25} = \frac{225}{25}$$
$$x = 9$$

31. PHOTOS The average cost of online photos decreased from $0.50 per print to $0.15 per print between 2002 and 2009. Find the average rate of change in the cost. Explain what it means.

$$.50$$

$$.15$$

$$m = \frac{.35}{7} = \frac{0.05}{1}$$

Suppose *y* varies directly as *x*. Write a direct variation equation that relates *x* and *y*. Then solve.

36. If $y = 15$ when $x = 2$, find *y* when $x = 8$.

$$y = kx$$

$$\boxed{y = 7.5x}$$

$$\frac{15}{2} = \frac{k \cdot 2}{2}$$

$$7.5 = k$$

$$y = 7.5 \cdot 8$$

$$y = 60$$

38. JOBS Suppose you earn $127 for working 20 hours.

   a. Write a direct variation equation relating your earnings to the number of hours worked.

   b. How much would you earn for working 35 hours?

$$y = k \cdot x$$

$$\boxed{y = 6.35x}$$

$$\frac{127}{20} = \frac{k \cdot 20}{20}$$

$$y = 6.35(35)$$

$$6.35 = k$$

$$\$222.25$$

Example 5

Find the next three terms of the arithmetic sequence
10. 23. 36. 49. ... .

62   75   8 8

$d = 13$

$a_n = 10 + (n-1)\cdot 13$

$= 10 + 13n - 13$

$a_n = 13n - 3$

1	10
2	23
3	36

Write an equation for the *n*th term of each arithmetic sequence.

41. $a_1 = 6, d = 5$

$y = 6 + (n-1) \cdot 5$

42. 28, 25, 22, 19, …

$$y = 28 + (n-1)(-3)$$

$$(n-1) - 3$$

For Wed. (turn in before you leave)

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No new assignment on Wed. Be ready for Thurs. quiz!