

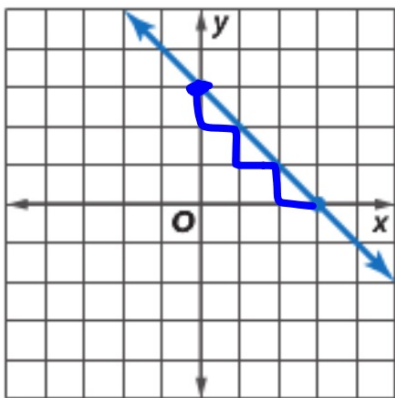
Algebra 1 Ch. 3 Review

Quiz 3.5-3.6 today

Ch. 3 (test is Wed.)

Whiteboards

3.



Proportional?

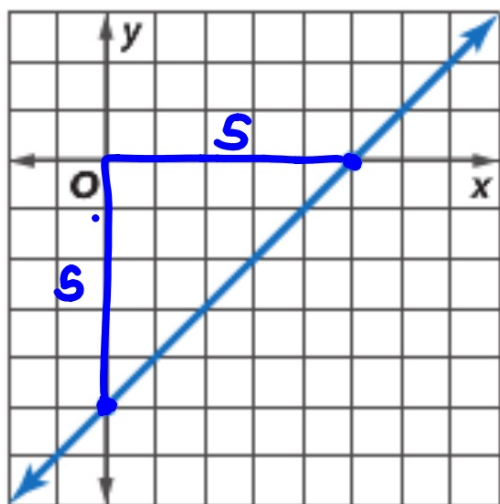
Write the equation

* Function notation

$$= -1x$$

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

2.



$$x = \frac{5}{5} = 1$$

$$f(x) = x + 5$$

$$y =$$

$$m = \frac{\text{rise}}{\text{run}}$$

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

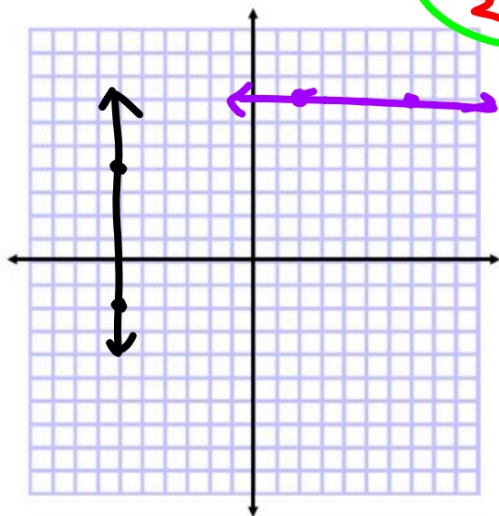
29. $(0, 5), (6, 2)$

$$= \frac{-3}{6} = -\frac{1}{2}$$

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

$$\frac{6}{0} = \text{undef}$$

$$\frac{0}{8} = 0$$



$$y = mx + b$$

Graph each equation.

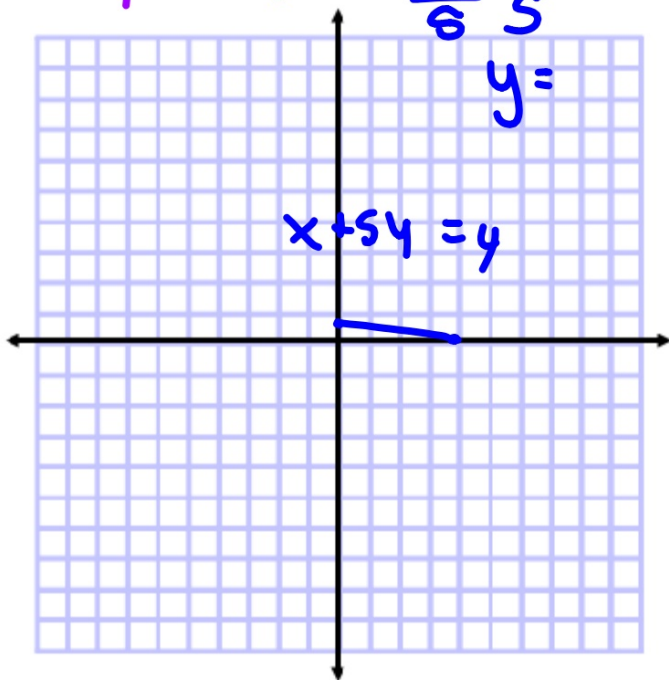
13. $y = -x + 2$
 $m = -1$

14. $x + 5y = 4$

x -int $(4, 0)$
 y -int $(0, \frac{4}{5})$

$5y = 4 - x$
 $y = \frac{4 - x}{5}$

$x + 5y = 4$



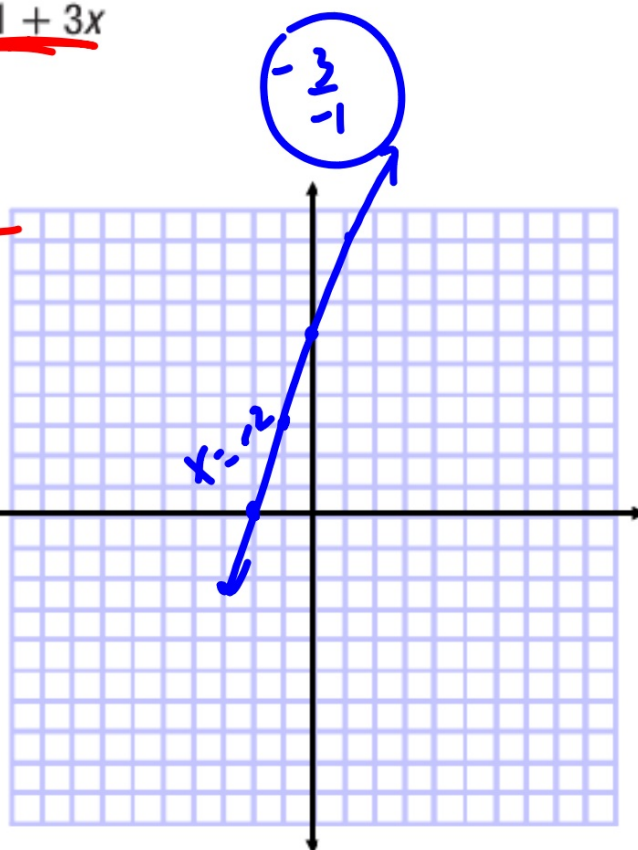
Solve each equation by graphing.

22. $0 = 16 - 8x$

23. $0 = 21 + 3x$

$$\begin{array}{l} \boxed{0 = 6 + 3x} \\ y = 3x + 6 \end{array} \quad \begin{array}{l} 0 = 6 + 3x \\ -6 \quad -6 \\ \hline -6 = 3x \\ \frac{-6}{3} = \frac{3x}{3} \\ -2 = x \end{array}$$

Where does it cross the x-axis?



Find the zero (solve)

24. $-4x - 28 = 0$

25. $25x - 225 = 0$

$-4x = 28$
 $x = -7$

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.

$0 = x - 85$
 $+85$

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.

$$\frac{-.35}{7} \quad \$-0.05$$

$$y = k \cdot x$$

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

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

$$(2, 15) \quad \frac{15}{2} = k \cdot \frac{2}{2}$$

$$7.5 = k$$

$$\cancel{y = 7.5 \cdot 8}$$

$$y = 60$$

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

- Write a direct variation equation relating your earnings to the number of hours worked.
- How much would you earn for working 35 hours?

$$\begin{aligned} y &= k \cdot x & k &= 6.35 & y &= 6.35x \\ \frac{127}{20} &= k \cdot \frac{20}{20} & & & y &= 6.35(35) = \$222.25 \end{aligned}$$

Example 5

Find the next three terms of the arithmetic sequence

10, 23, 36, 49, ... 62, 75, 88

$$d = 13$$

$$a_n = a_1 + (n-1)(d)$$

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

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

41. $a_1 = 6, d = 5$

42. 28, 25, 22, 19, ...

