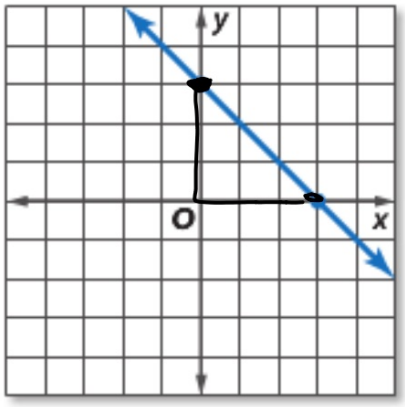
Algebra 1 Ch. 3 Review

Quiz 3.5-3.6

Ch. 3 (test is Mon.)

Whiteboards

3.

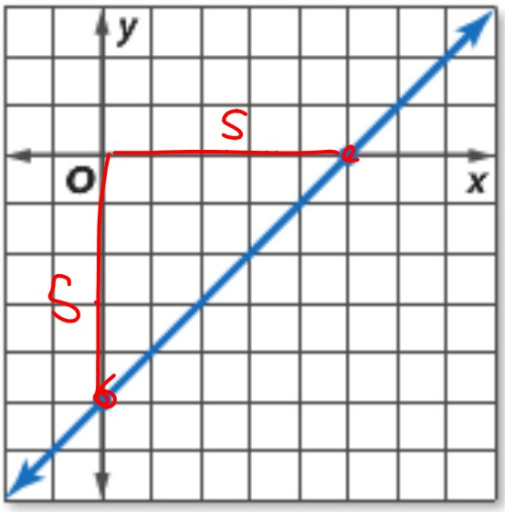


Proportional?
Write the equation
Function notation

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

$f(x) = -x + 3$

2.



$y = x - 5$

$f(x) = x + -5$

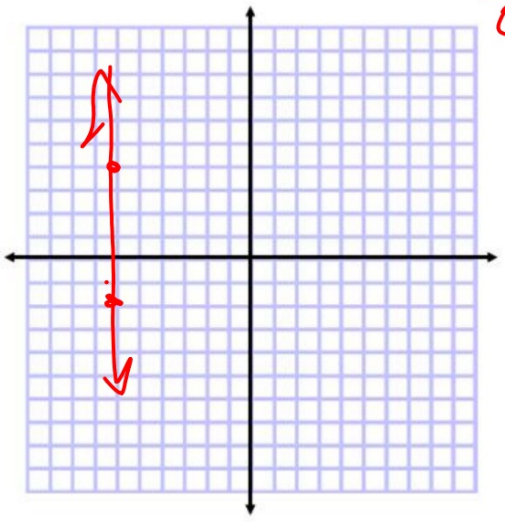
$\frac{\text{rise}}{\text{run}}$

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

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

30. (−6, 4), (−6, −2)

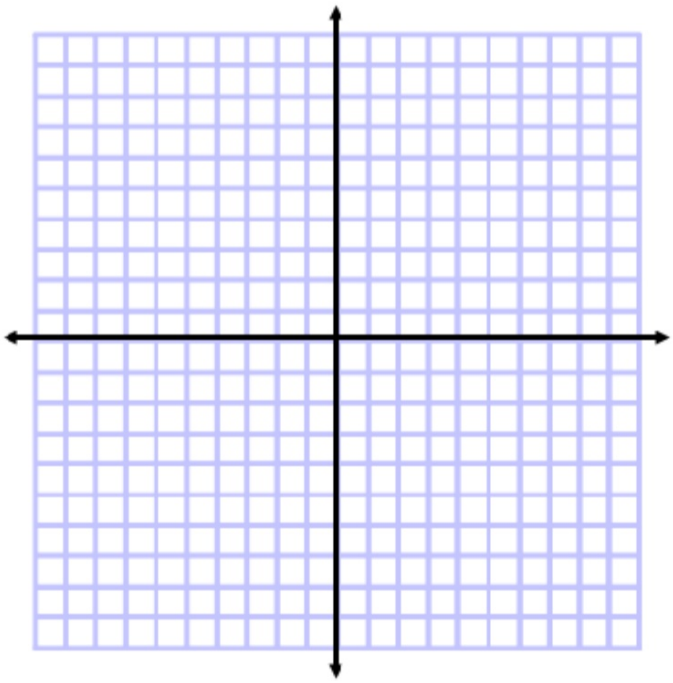
$m = \frac{6}{0}$ undef



Graph each equation.

13. $y = -x + 2$

14. $x + 5y = 4$



Solve each equation by graphing.

22. $0 = 16 - 8x$

23. $0 = 21 + 3x$

$y = 21 + 3x$

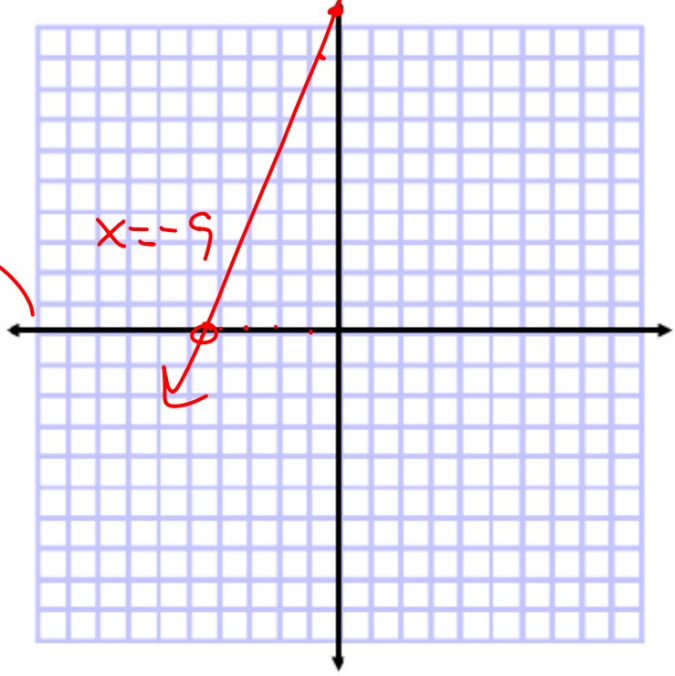
$\frac{3}{1}$

$0 = 21 + 3x$

$-21 \quad -21$

$\frac{-21}{3} = \frac{3x}{3}$

$-7 = x$



Where does it cross the x-axis?

Find the zero (solve)

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.

$0 = x - 85$

$+85 \quad +85$

$85 = x$

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.

(2, 15)

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 $x = 8$.

$y = k \cdot x$

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

$7.5 = k$

$y = 7.5x$

$y = 7.5 \cdot 8$

$y = 60$

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?

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

$k = 6.35$

$E = 6.35h$

$y = 6.35x$

$y = 6.35(35)$

$\$222.25$

Example 5

Find the next three terms of the arithmetic sequence

10. 23. 36. 49. …62 75 88

+13 +13 +13

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

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

$10 + (n-1)(+5)$

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

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

41. $a_1 = 6, d = 5$

$a_n = 6 + (n-1)(5)$

42. 28, 25, 22, 19, …

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