Chapter 8
Section 4
Slope

Finding intercepts from graphs - Review

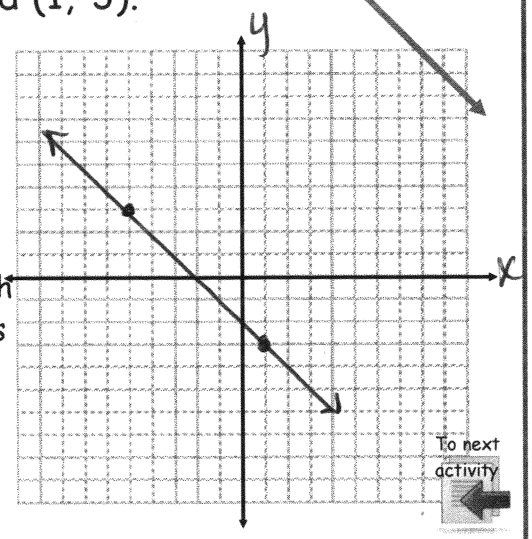
Graph the line that passes through the points (-5,3) and (1,-3).

Identify:

1. x-intercept

2. y-intercept

3. quadrants through which the line passes



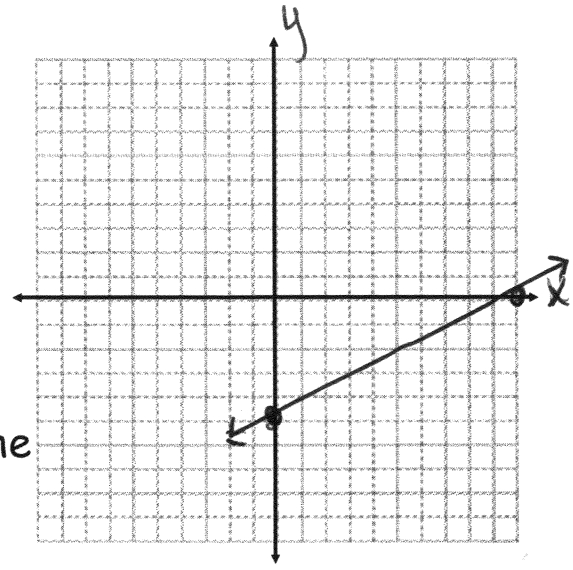
Activity 3 Key

Finding intercepts from equations - Review

Graph the line: x - 2y = 10

Identify:

1. x-intercept
   let y be zero
2. y-intercept
   let x be zero
3. quadrants through which the line passes



x-intercept
let y = 0

$x - 2y = 10$

$x - 2(0) = 10$

$x - 0 = 10$

$x = 10$

y-intercept
let x = 0

$x - 2y = 10$

$0 - 2y = 10$

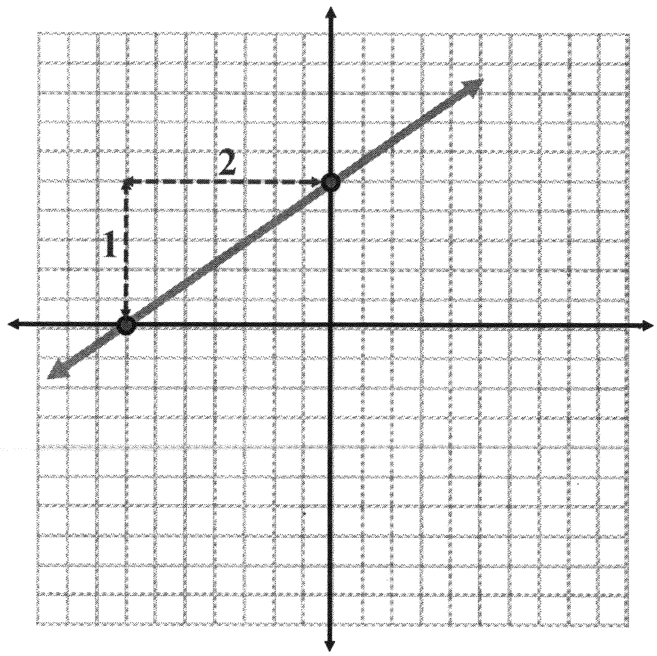
$-2y = 10$

$\frac{-2y}{-2} = \frac{10}{-2}$

$y = -5$

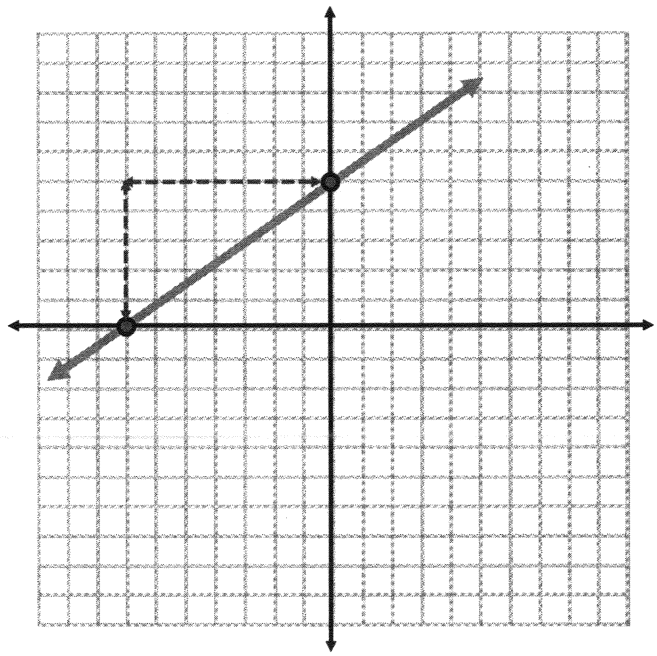
Graphing Basics

Count from the point on the left to the point on the right. In this case you will need to go **up** and **right**.



Graphing Basics

Write your answer as a fraction with the **rise over the run.**



Erase to see → answer.

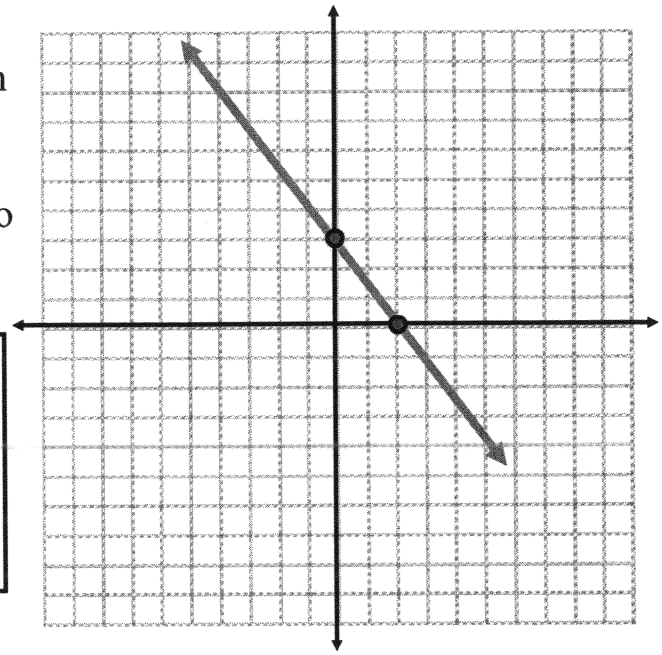
$\frac{5}{7}$

Graphing Basics

Count from the point on the left to the point on the right. In this case, count **down** and **right** to move from point to point.

Erase to see → answer.

$-\frac{3}{2}$

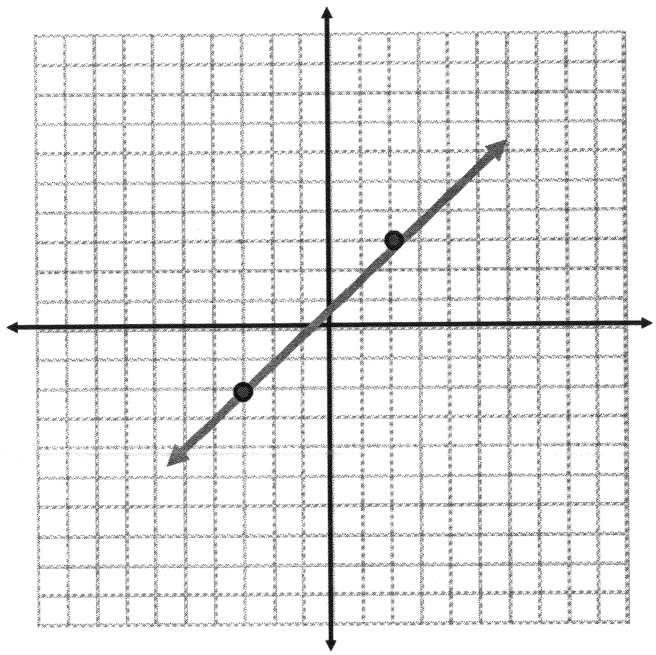


Graphing Basics

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

Positive Slope

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



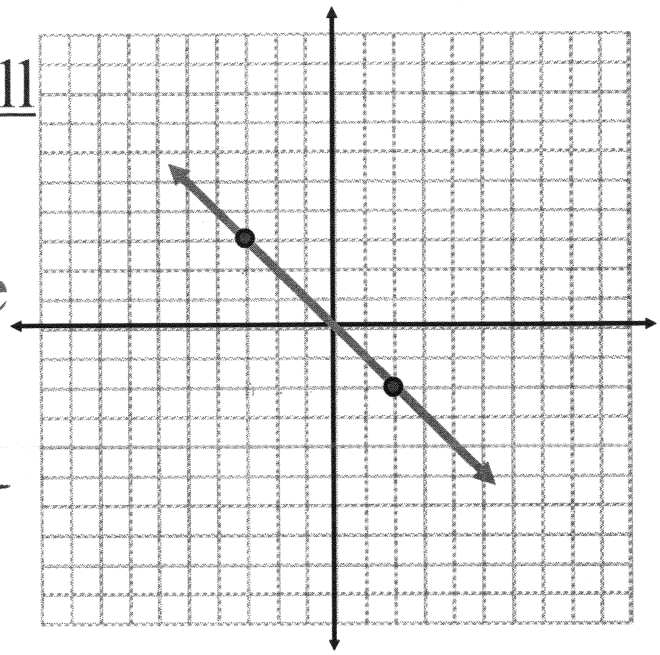
http://www.youtube.com/watch?v=_oqKaT3V-Us&feature=related

Graphing Basics

$$\text{Slope} = \frac{\text{rise / fall}}{\text{run}}$$

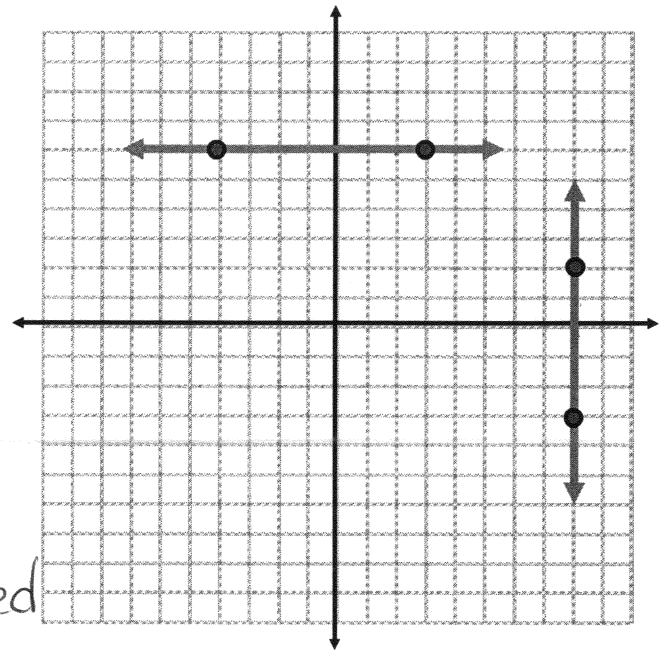
Negative Slope

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



Graphing Basics

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



Horizontal Line:

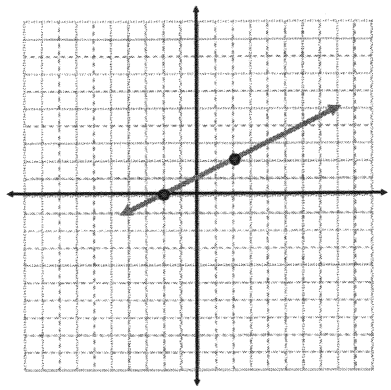
$\frac{0}{7} = 0$

Vertical Line:

$\frac{5}{0}$ undefined

Graphing Basics

For each graph, find the:
1) x-intercept
2) y-intercept
3) slope of the line
4) quadrants through which the line passes.



Graph 1

1) _____
2) _____
3) _____
4) Circle the quadrants through which the line passes. I II III IV

Pull

1. (-2, 0)
2. (0, 1)
3. 1/2
4. I, II, III

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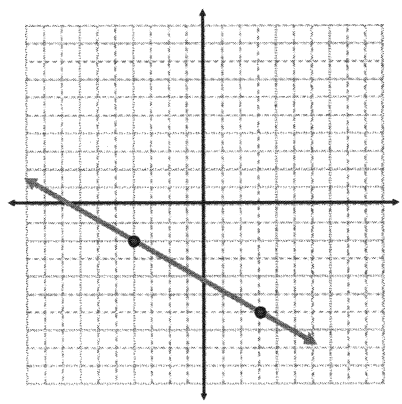
Graphing Basics

For each graph, find the:
1) x-intercept
2) y-intercept
3) slope of the line
4) quadrants through which the line passes.



Graph 2

1) _____
2) _____
3) _____
4) Circle the quadrants through which the line passes. I II III IV

Pull

1. (-7, 0)
2. (0, -4)
3. -4/7
4. II, III, IV

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FORMULA FOR SLOPE

$$\frac{\text{RISE}}{\text{RUN}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Example: What is the slope of a line containing the following points? (5,3) & (2,2)

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 3}{2 - 5} = \frac{-1}{-3} = \frac{1}{3}$$

FORMULA FOR SLOPE

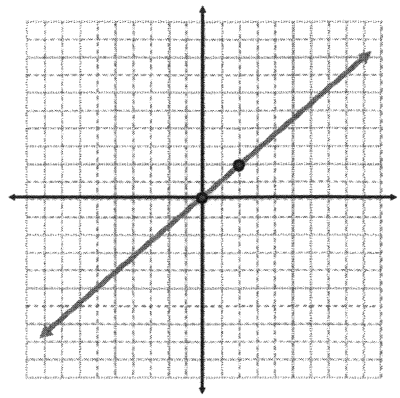
$$\frac{\text{RISE}}{\text{RUN}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Example: What is the slope of a line containing the following points? (1,-3) & (5,4)

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - -3}{5 - 1} = \frac{7}{4}$$

Graphing Basics

For each graph, find the:
1) x-intercept
2) y-intercept
3) slope of the line
4) quadrants through which the line passes.



Graph 3

1) _____
2) _____
3) _____
4) Circle the quadrants through which the line passes. I II III IV

Pull

1. (-4, 0)
2. (0, 1)
3. 1/4
4. I, II, III

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FORMULA FOR SLOPE

$$\frac{\text{RISE}}{\text{RUN}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Example: What is the slope of a line containing the following points? (7,-1) & (9,-1)

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-1 - -1}{9 - 7} = \frac{0}{2} = 0$$