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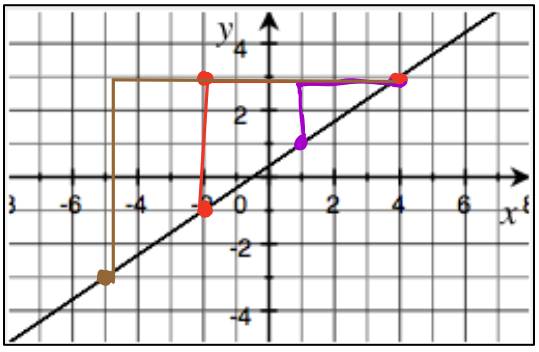
LEARNING OBJECTIVE: We will explore the concept of slope and interpret it as a unit rate. (G8M4L14)

CONCEPT DEVELOPMENT:

Which line is steeper?

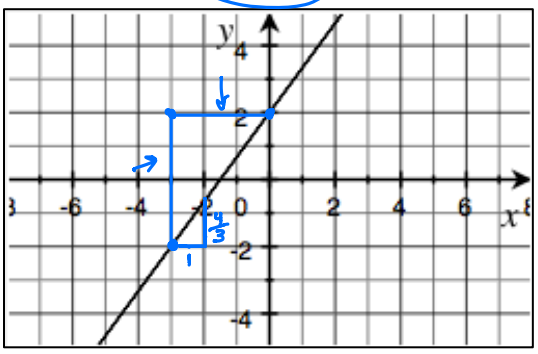
Line A



EVERY TIME YOU GO UP 4 UNITS, YOU GO 6 UNITS TO THE RIGHT.
EVERY TIME YOU GO UP 2 UNITS, YOU GO 3 UNITS TO THE RIGHT

$\frac{4}{6} = \frac{2}{3}$

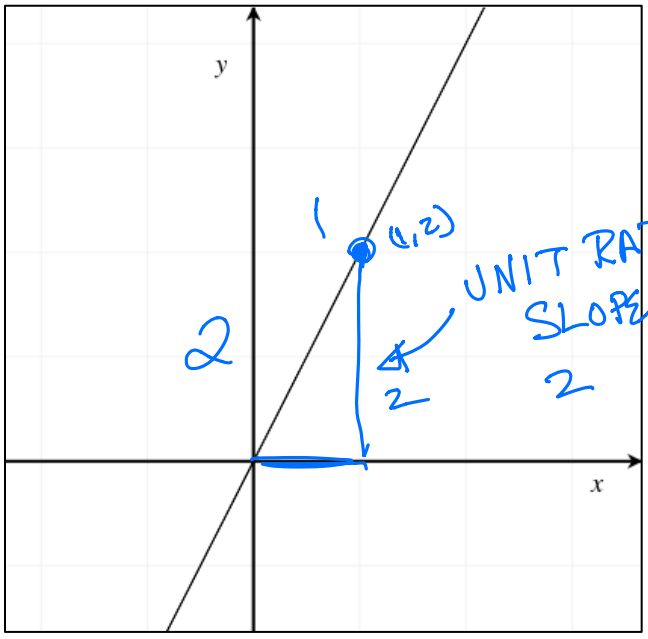
Line B



EVERY TIME YOU GO UP 4 UNITS YOU GO RIGHT 3 UNITS

Slope: the measure of steepness or slant of a line. You can find the slope of a line by looking at the graph's unit rate.

Finding the unit rate of a graph:



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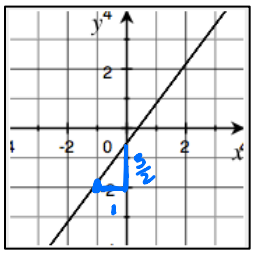
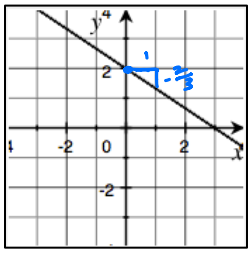
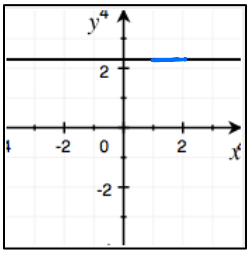
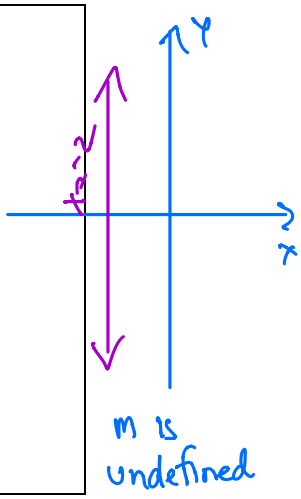
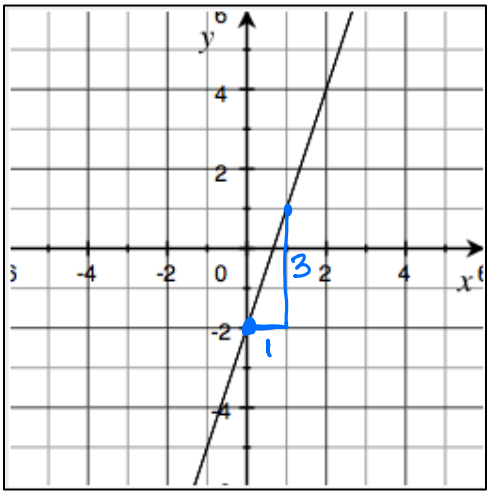
Positive Slope Left-to-right inclining lines	Negative slope Left-to-right declining lines	Zero slope Horizontal Lines
 $m = \frac{3}{2}$	 $m = -\frac{2}{3}$	$m = 0$ 



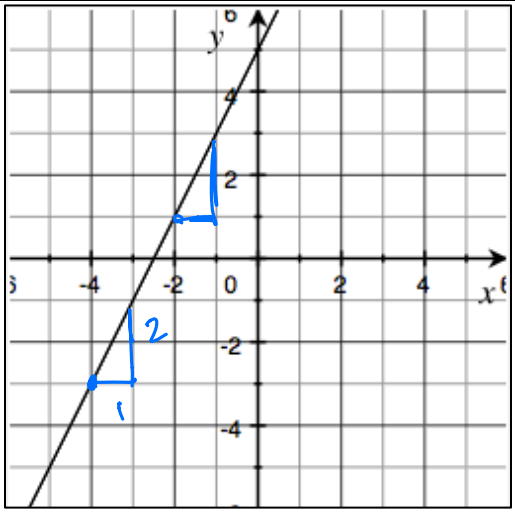
GUIDED PRACTICE:

Steps for Determining the Slope of a Line—as a Unit Rate

1. Identify one point on the line and another point 1 unit away to the right. Label the point Q.
2. Count the number of vertical units from point Q to the line.
3. If necessary, express your slope as a fraction (not a decimal).



Slope: $m = 3$



Slope: $m = 2$

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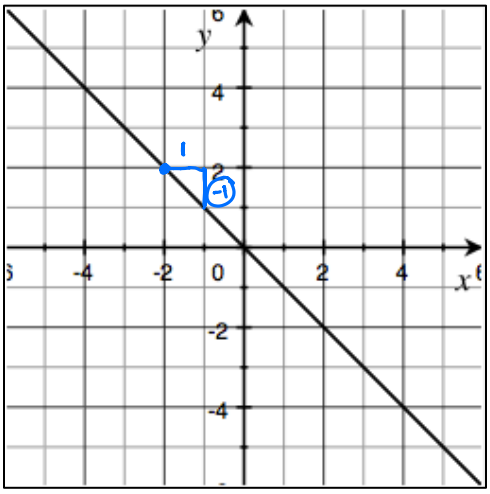
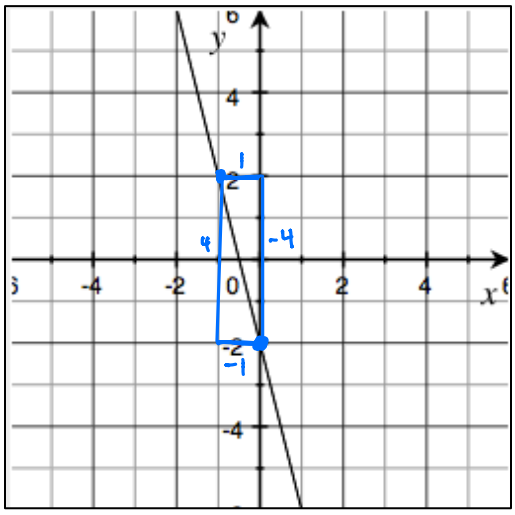
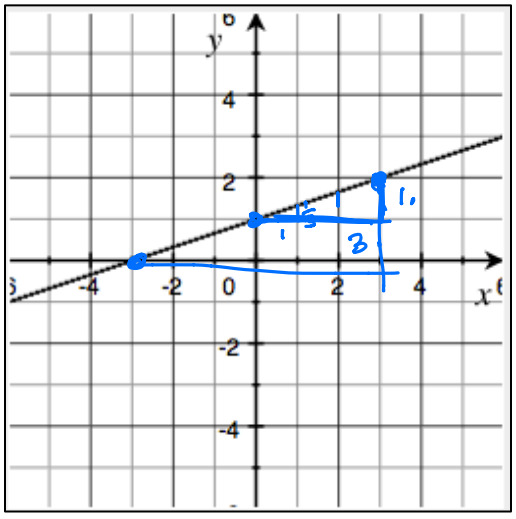


Slope: $m = -1$

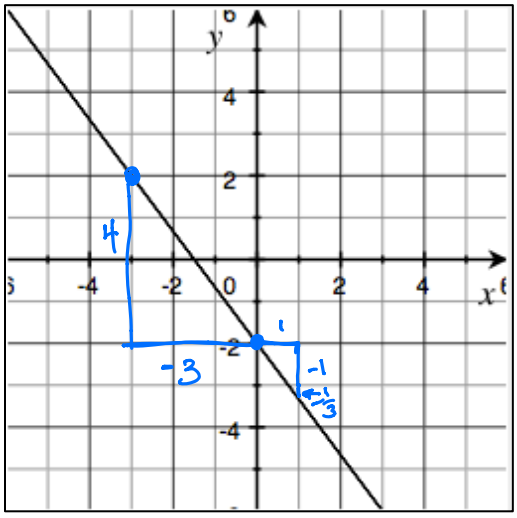


Slope: $m = -4$



$m = \frac{1}{3}$

Slope:



Slope: $m = -\frac{4}{3}$

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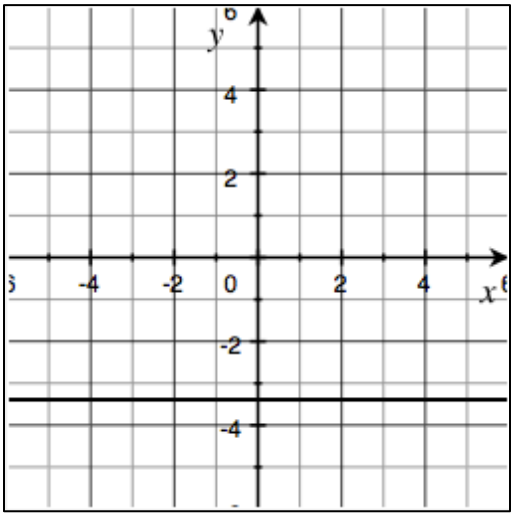
Independent Practice:

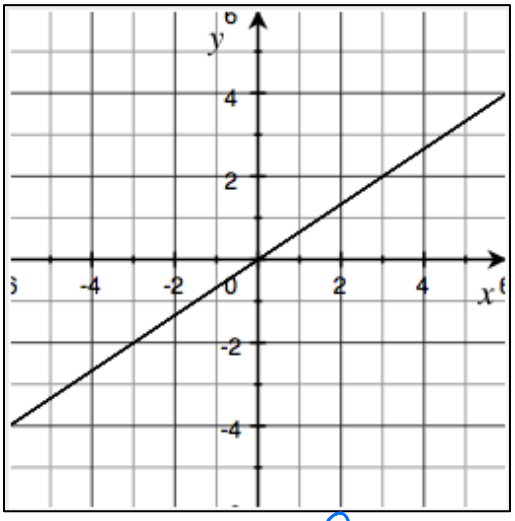
Determine the slope of each line.

Slope:



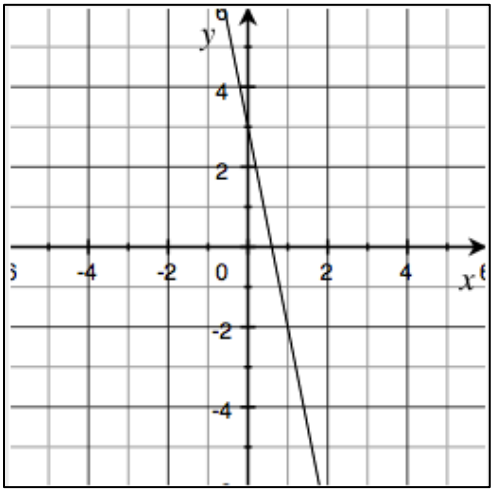
$m = 0$

Slope:



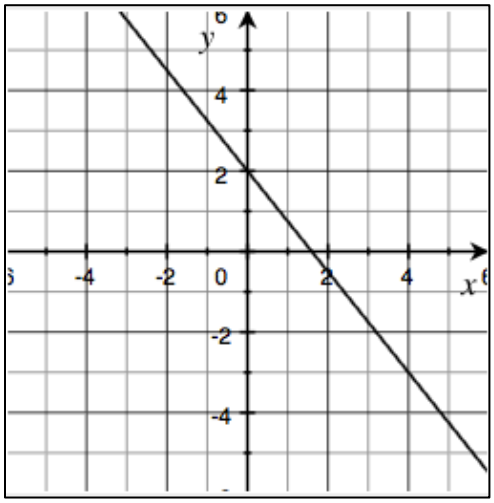
$m = \frac{2}{3}$

Slope:



$m = -5$

Slope:



$m = -\frac{5}{4}$

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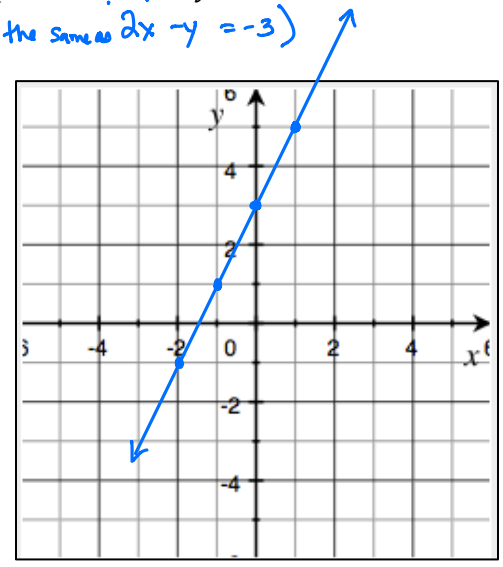
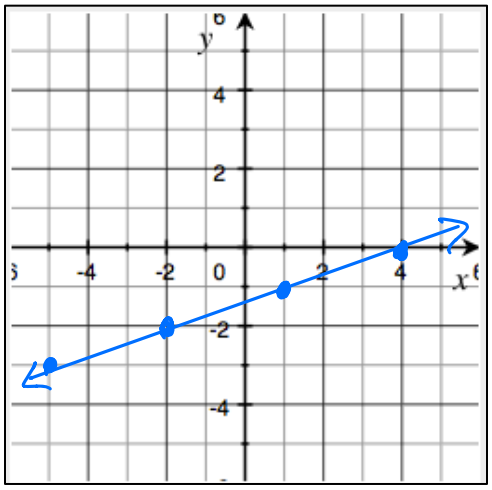
Activating Prior Knowledge:

Plot 4 points on the graph of the linear equation $-2x + y = 3$	Plot 4 points on the graph of the linear equation $x - 3y = 4$
(is the same as $2x - y = -3$) 	$x - (-6) = 4$ 

Closure:

Give out page s78 from ENY for closure.

Teacher Notes:

Lesson 15 ENY