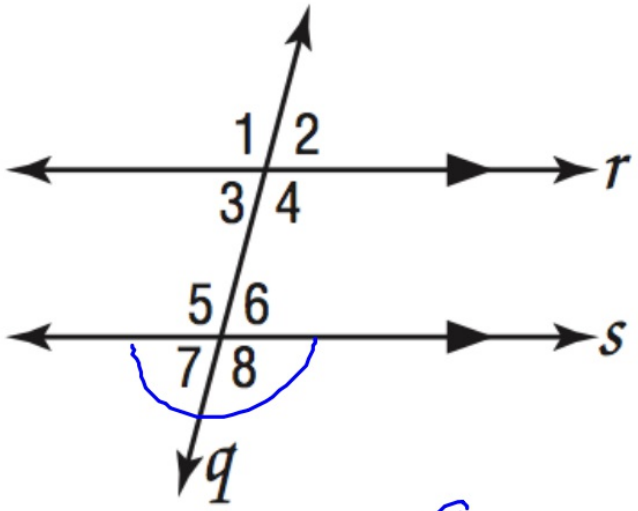
Geometry BELL WORK

Classify the relationship between each pair of angles as *alternate interior*, *alternate exterior*, *corresponding*, or *consecutive interior* angles.

1) $\angle 4$ and $\angle 5$

2) $\angle 4$ and $\angle 6$



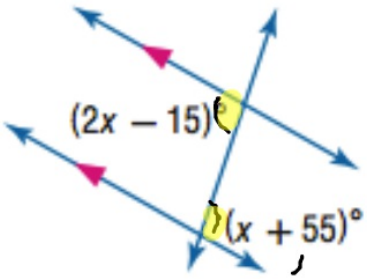
3) If $m\angle 8 = 110°$, what is $m\angle 7$?

70°

180
-110
70

Assignment:

3.2 pg. 181 # 1-10



alternate interior (congruent)

$2x - 15 = x + 55$

$-x \quad -x$

$x - 15 = 55$

We used angle relationships in parallel lines to determine congruent angles.

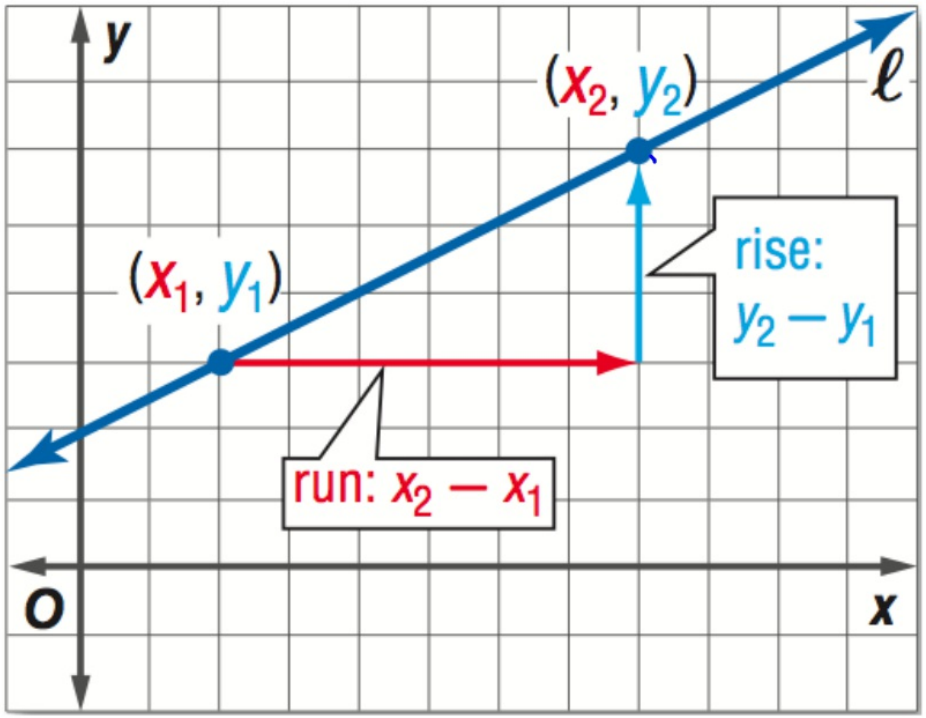
Today we will:

* Find slopes of lines.
* Use slope to identify parallel and perpendicular lines

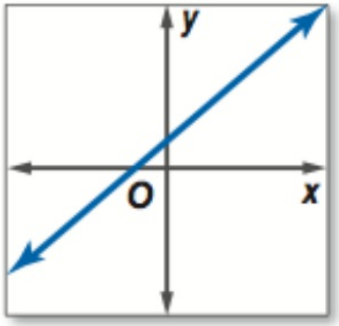
(G.CO.C.9 Congruence: Prove theorems about lines and angles)

The rate of change on a graph is the slope.

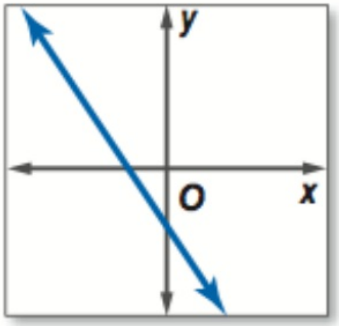
Slope (m) is measured as $m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$



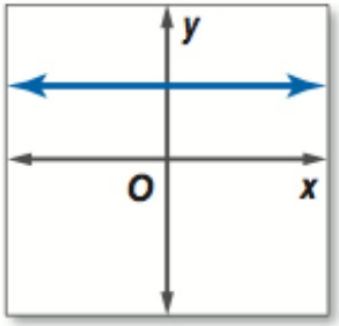
Positive Slope



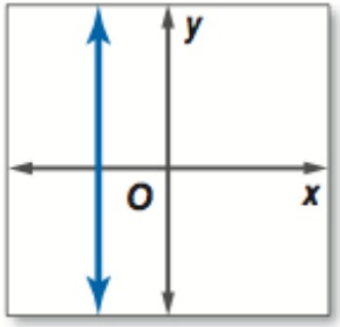
Negative Slope



Zero Slope



Undefined Slope



Determine the slope of the line that contains the given points.

1. $S(-1, 2)$, $W(0, 4)$

$x_1 y_1 \quad x_2 y_2$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{4 - 2}{0 - (-1)} = \frac{2}{1}$$

$$= 2$$

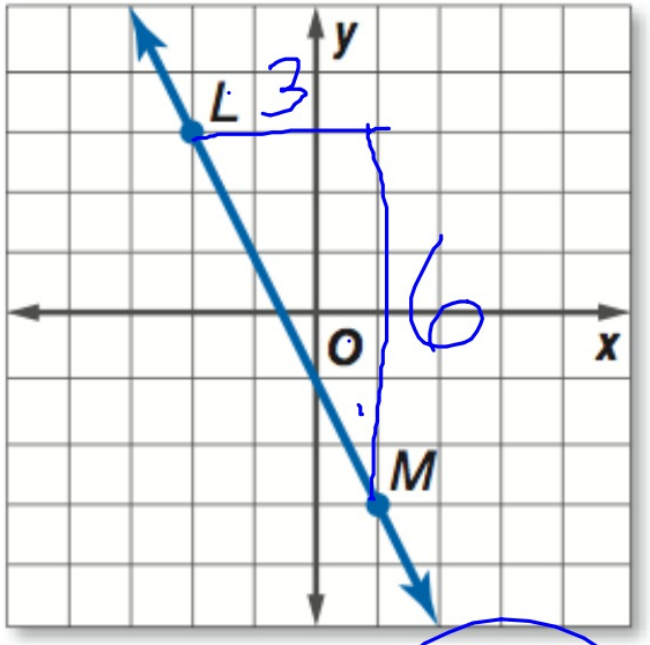
2. $G(-2, 5)$, $H(1, -7)$

$x_1 y_1 \quad x_2 y_2$

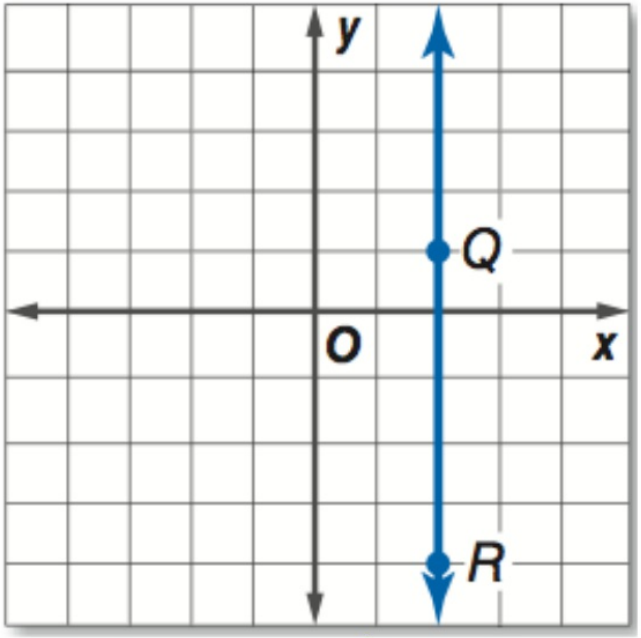
$$\frac{-7 - 5}{1 - (-2)} = \frac{-12}{3}$$

$$= -4$$

Find the slope of each line.

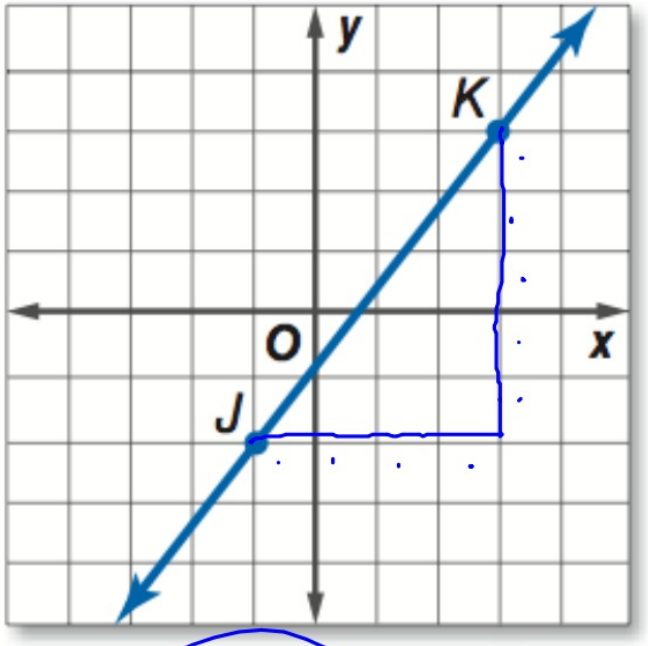


$-\frac{6}{3} = -2$

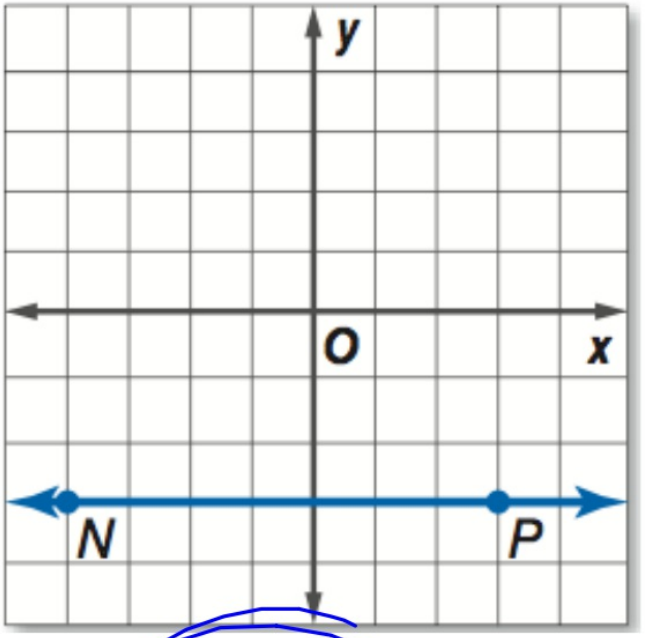


undefined

Find the slope of each line.



$\frac{5}{4}$

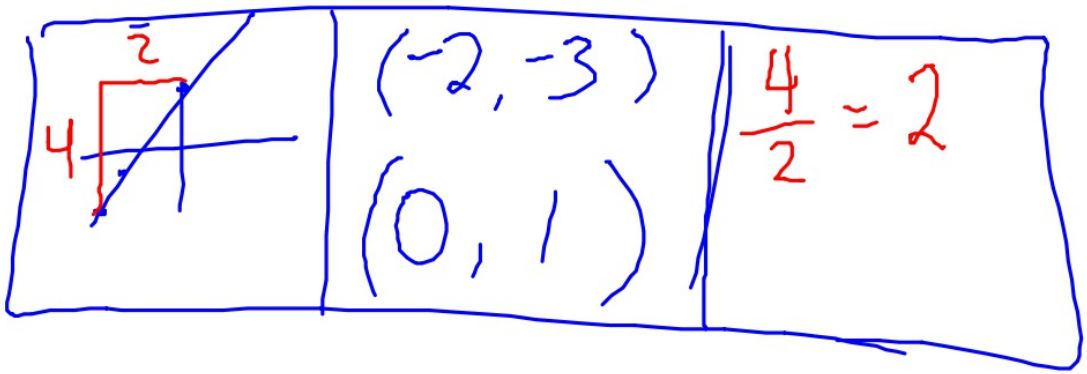


$\emptyset$

Activity: matching slopes and graphs

Here are the potential answers:

(1, -2) (3, 1)	$slope = -1$	$slope = 1$	(2, -2) (0, -1)
$slope = -\frac{3}{2}$	(-4, -2) (0, 4)	(-2, -1) (0, 3)	$slope = -2$
(-2, 2) (0, 3)	$slope = 2$	$slope = \frac{3}{2}$	(1, -2) (3, 2)
$slope = -\frac{1}{2}$	(-2, -2) (2, -6)	(1, -2) (0, 1)	$slope = \frac{1}{2}$
$slope = -3$	$slope = 2$	(0, 4) (2, 1)	(-2, -3) (0, 1)
(-2, -2) (1, 1)	(2, -2) (1, 0)	$slope = 2$	$slope = \frac{3}{2}$



$(-2, -3)$

$(0, 1)$

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

$$\frac{1-(-3)}{0-(-2)}$$

Assignment:

3.3a pg 191 # 12-21 (18-21 SHOW ALL WORK!)