

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 $\angle 5$

alternate interior

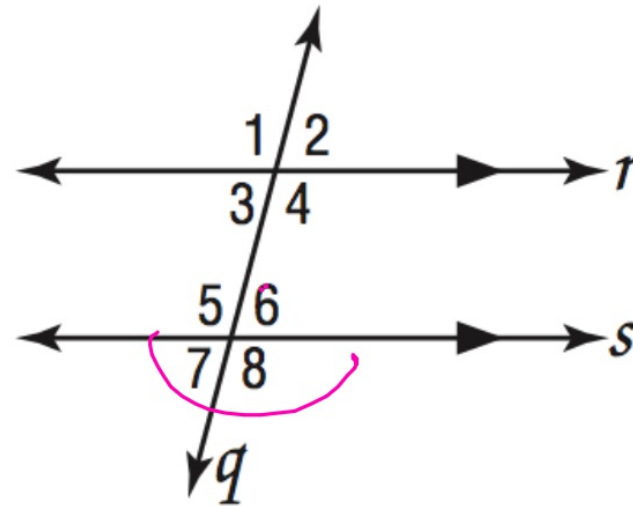
2) $\angle 4$ and $\angle 6$

consecutive interior

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

70°

$$\begin{array}{r} 180 \\ -110 \\ \hline \end{array}$$



Assignment:

3.2 pg. 181 # 1-10

3-3 Slopes of Lines

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

Today we will:

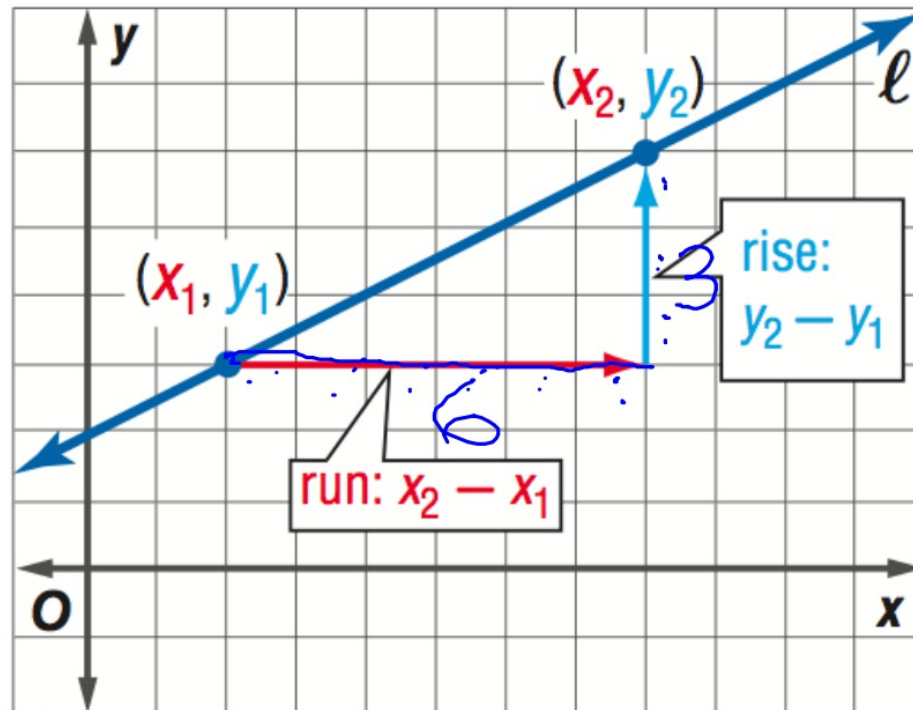
- * Find slopes of lines.
- * Use slope to identify parallel and perpendicular lines

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

The rate of change on a graph is the slope.

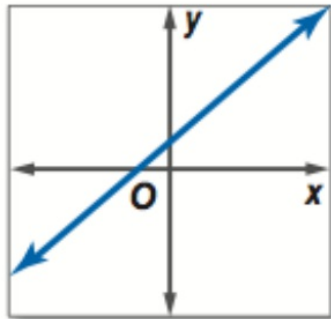
Slope (m) is measured as

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

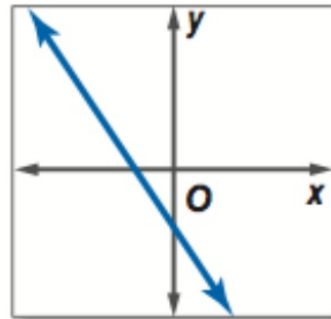


$$m = \frac{3}{6} = \frac{1}{2}$$

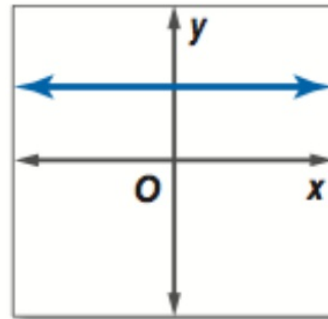
Positive Slope



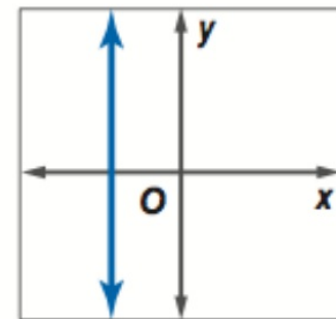
Negative Slope



Zero Slope



Undefined Slope



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

1. $S(-1, 2), W(0, 4)$
 $x_1, y_1 \quad x_2, y_2$

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

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

$$= 2$$

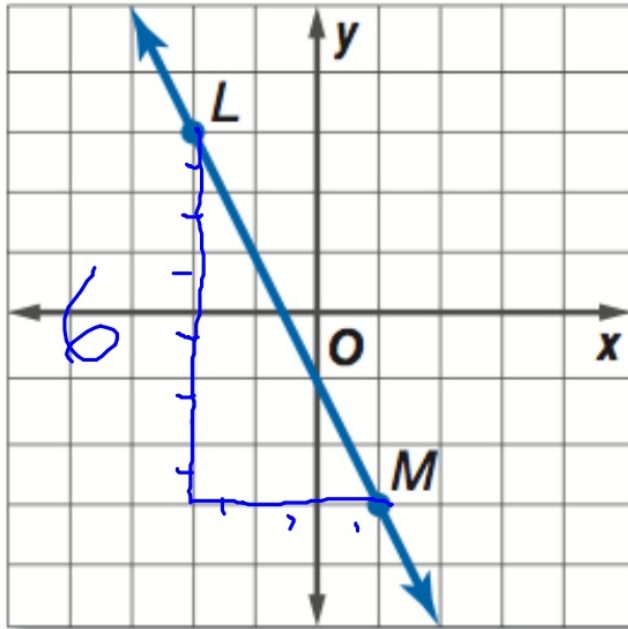
2. $G(-2, 5), H(1, -7)$

$$x_1, y_1 \quad x_2, y_2$$

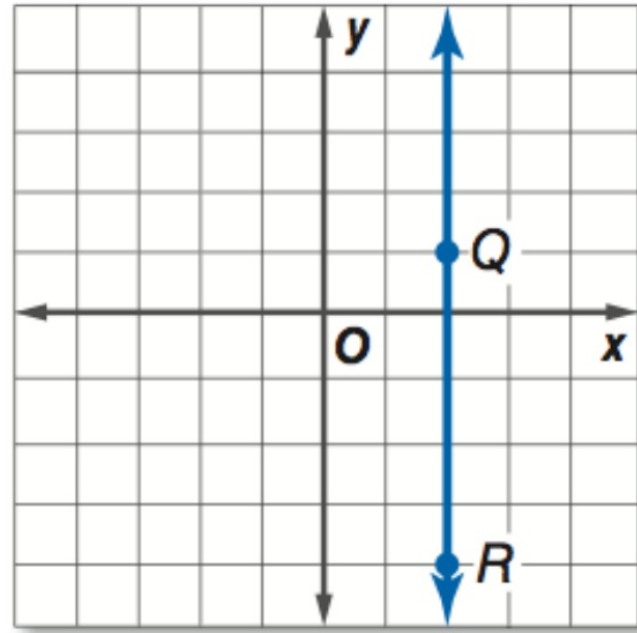
$$\frac{-7 - 5}{1 - (-2)} = \frac{-12}{3}$$

$$= -4$$

Find the slope of each line.

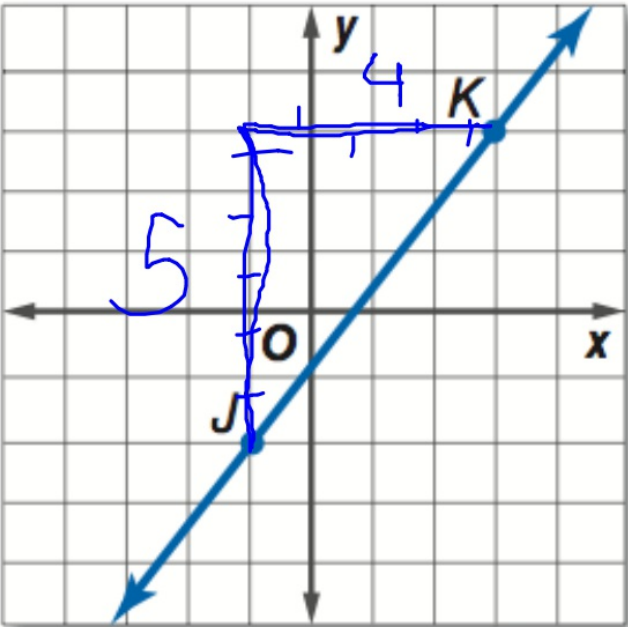


$$-\frac{6}{3} = -\frac{2}{1} = -2$$

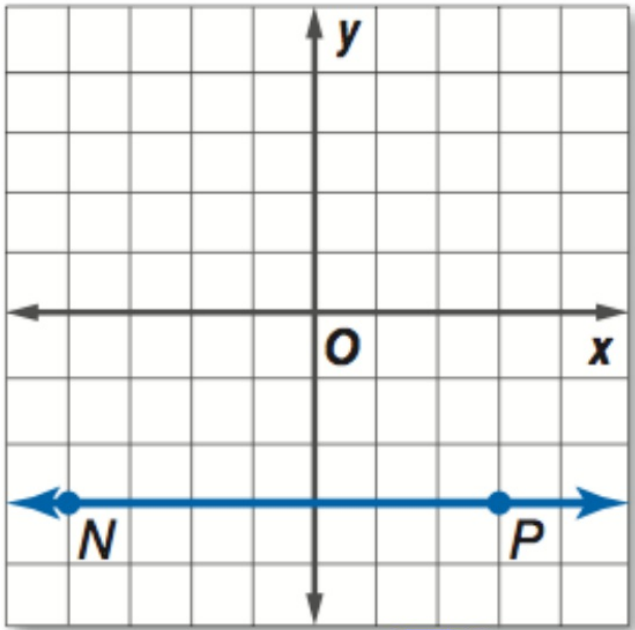


undefined

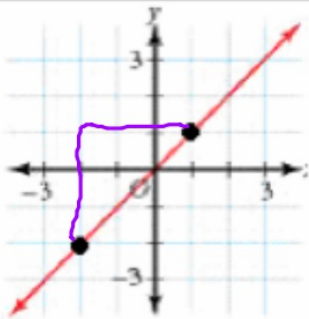
Find the slope of each line.

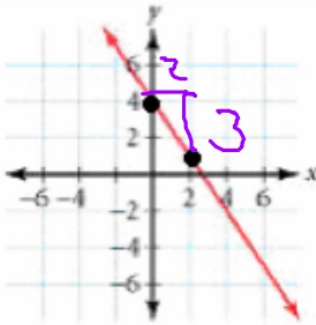


$$m = \frac{5}{4}$$



0

Graph	Points	Slope
	$(1, 1)$ $(-2, -2)$	$\frac{3}{3} = 1$

	$(0, 4)$ $(2, 1)$	$-\frac{3}{2}$
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Activity: matching slopes and graphs

Here are the potential answers:

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

Assignment:

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