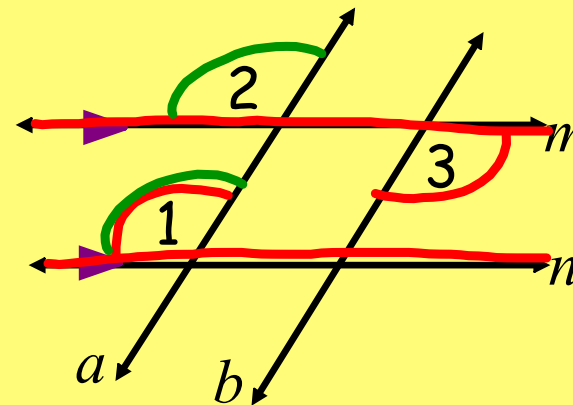


10/18/19 - Warm Up Problem

Given: $m \parallel n$
 $\angle 1 \cong \angle 3$

Prove: $a \parallel b$



Statements	Justifications
1. $m \parallel n$	Given
2. $\angle 1 \cong \angle 3$	Given
3. $\angle 1 \cong \angle 2$	Corresponding Theorem
4. $\angle 2 \cong \angle 3$	Trans. Prop. of congruence
5. $a \parallel b$	Alt. Ext. Angles Converse

Section 3.7 - Equations of Lines in the Coordinate Plane

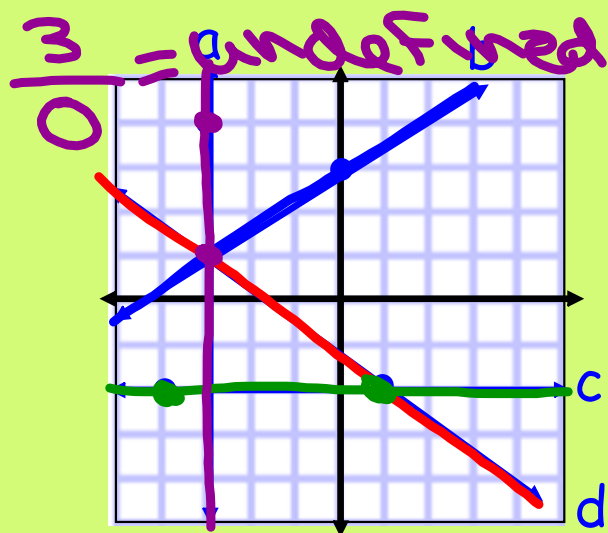
Goals:

- Calculate slopes of lines when given two points

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

Slope in the Coordinate Plane

- Negative slope lines go downhill
- Positive slope lines go uphill
- Zero slope lines are horizontal
- Undefined slope lines are vertical



$$\frac{0}{\text{any}} = 0$$

Calculating Slopes of Lines

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

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

1. $\overset{x}{-4}, \overset{y}{0}$ and $\overset{x}{6}, \overset{y}{-4}$

$$\frac{0 - -4}{-4 - 6} = \frac{4}{-10} = -\frac{2}{5} = -\frac{2}{5}$$

2. $(1, 4)$ and $(1, -2)$

$$\frac{4 - -2}{1 - 1} = \frac{6}{0} = \text{undefined}$$

3. $(4, 2)$ and $(-3, 2)$

$$\frac{2 - 2}{-3 - 4} = \frac{0}{-7} = 0$$

$$\frac{2 - 2}{4 - -3} = \frac{0}{7} = 0$$

$$\frac{2 - 2}{-3 - 4} = \frac{0}{-7} = 0$$

No Assignment!

Reminder:

Quarter 1 ends Friday!

- make sure all missing assignments are turned in
- do any retakes you want on Concepts 1-6