

February 3, 2015

$$A = \{x \in \mathbb{N} \mid 3 \leq x < 7\}$$

$$B = \{x \in \mathbb{Z} \mid -3 < x \leq 4\}$$

①  $A \cup B$   
 $\{x \in \mathbb{Z} \mid -3 < x < 7\}$   
 $(-3, 7)$

②  $A \cap B$   
 $\{x \in \mathbb{N} \mid 3 \leq x \leq 4\}$   
 $[3, 4]$

Feb 3-10:47 AM

Feb 3-11:02 AM

Slope ( $m$ )

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

Steps to Calculate Slope

- ① Do a quick graph to determine if the slope is positive or negative.
- ② Label  $y_2, y_1, x_2, x_1$ .
- ③ Use formula:  $m = \frac{y_2 - y_1}{x_2 - x_1}$

Feb 3-11:07 AM

$(x_1, y_1) = (3, 7)$  and  $(x_2, y_2) = (4, 6)$

① \* Red Graph from Left to Right

a.) if the line goes up, then positive slope.

b.) if the line goes down, then neg. slope.

②  $m = \frac{(6) - (7)}{(4) - (3)}$

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

down one unit over one unit

$$\frac{a}{b} = \frac{-a}{b} = \frac{a}{-b}$$

Feb 3-11:12 AM

$(5, 8)$ ;  $m = \frac{3}{4}$

$(5 + 4, 8 + 3) = (9, 11)$

Feb 3-11:21 AM

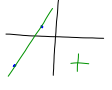
$(-2, -5)$ ;  $m = -\frac{3}{5}$

$(-2 + 3, -5 + (-3)) = (-2 + (-3), -5 + (-3))$

$$= (-7, -8)$$

Feb 3-11:25 AM

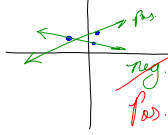
$(x_1, y_1) \neq (x_2, y_2)$   
 $(-3, 2) \neq (-5, -11)$

① 

②  $m = \frac{(-11) - (2)}{(-5) - (-3)}$   
 $= \frac{-13}{-2} = \frac{13}{2}$

Feb 3-11:30 AM

$(-\frac{1}{2}, \frac{3}{4}) \neq (\frac{1}{3}, \frac{4}{5})$

① 

②  $m = \frac{(\frac{4}{5}) - (\frac{3}{4})}{(\frac{1}{3}) - (-\frac{1}{2})}$   
 $= \frac{\frac{16-15}{20}}{\frac{2+3}{6}}$   
 $= \frac{\frac{1}{20}}{\frac{5}{6}}$

$\frac{3}{4} < \frac{4}{5}$

$= \frac{1}{20} \cdot \frac{6}{5} = \frac{6}{100} = \frac{3}{50}$

Keep K  
 Change C  
 Flip F

Feb 3-11:36 AM

Do  $(-\frac{5}{7}, -\frac{2}{3}) \neq (\frac{4}{3}, -\frac{1}{3})$   
 and  
 3.2 COR

Feb 3-11:48 AM