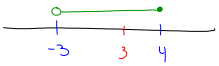
February 3, 2015

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

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



① $A \cup B$

$\{x \in \mathbb{Z} \mid -3 < x < 7\}$

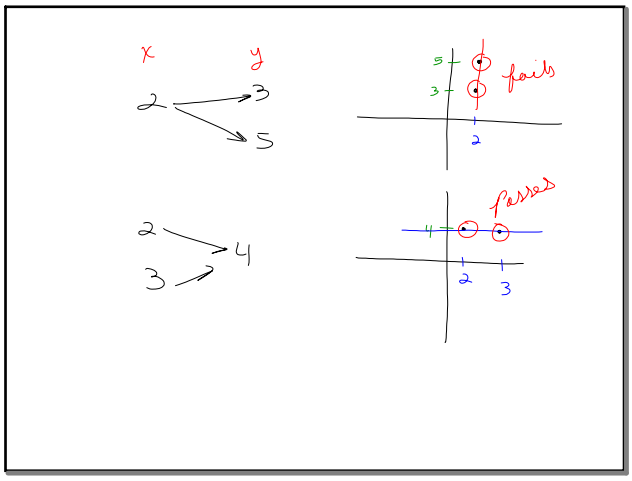
$(-3, 7)$

② $A \cap B$

$\{x \in \mathbb{N} \mid 3 \le x \le 4\}$

$[3, 4]$

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

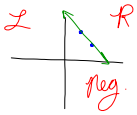
① Do a quick graph to determine if the slope is positive or negative.

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

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

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 $m = \frac{(6) - (7)}{(4) - (3)} = \frac{-1}{1} = -1$

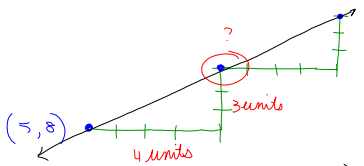
down one unit

over one unit

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

Feb 3-11:12 AM

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



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

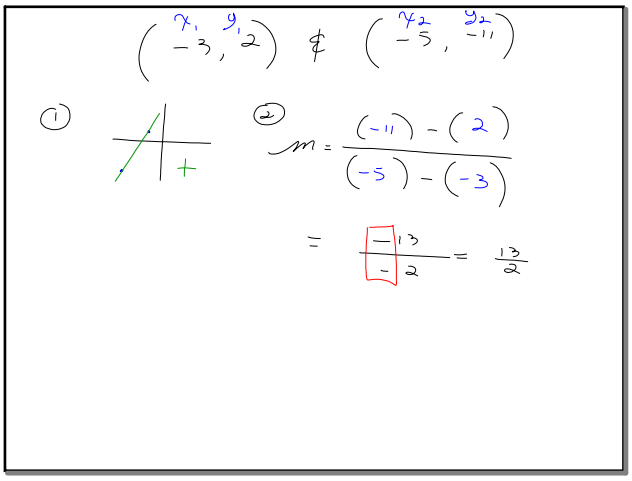
Feb 3-11:21 AM

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

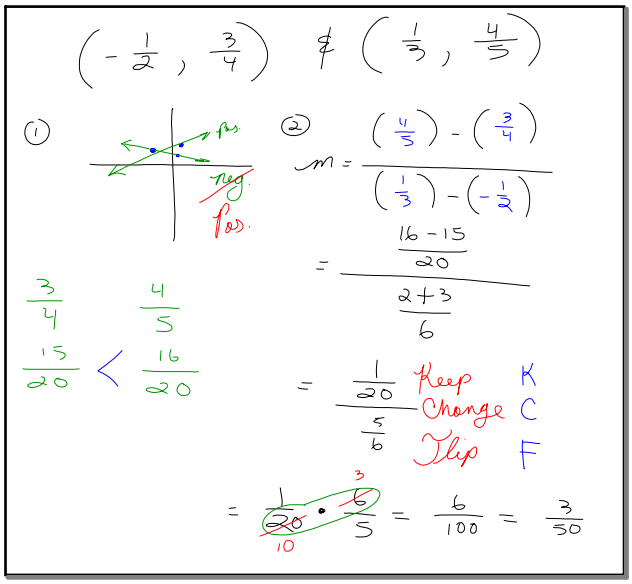
$(-2 + 5, -5 + (-3)) = (-2 + (-3), -5 + 3)$

$(3, -8)$ $= (-7, -2)$

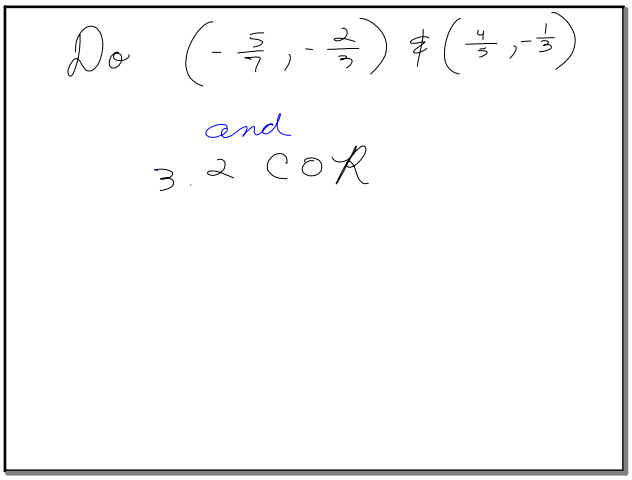
Feb 3-11:25 AM



Feb 3-11:30 AM



Feb 3-11:36 AM



Feb 3-11:48 AM