Math 0099
University of North Georgia
Spring 2015
Quiz #4

Name: Key Date: February 6, 2015

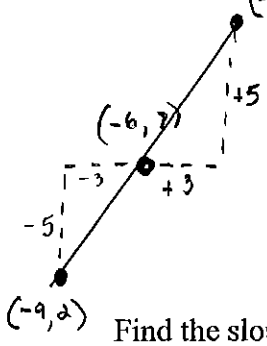
1. Given the following to two ordered pairs: $(5, 8)$ *and* $(11, 3)$, find the vertical and horizontal change (separately).

$\Delta y =$ $3 - 8 = -5$ or $8 - 3 = 5$

$\Delta x =$ $11 - 5 = 6$ or $5 - 11 = -6$

Note: $\frac{\Delta y}{\Delta x} = -\frac{5}{6}$ or $\frac{\Delta y}{\Delta x} = -\frac{5}{6}$

2. Given the ordered pair (-6, 7) and a slope (m) of $\frac{5}{3}$, find another ordered pair on the same line.



5 units of rise / 3 units of run

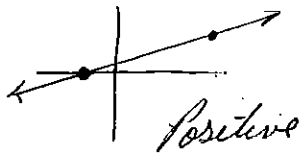
$(-6+3, 7+5)$ or $(-6+(-3), 7+(-5))$

$(-3, 12)$ $(-9, 2)$

Find the slope given the following ordered pairs using the **Steps** covered in class.

3. $(-3, 0)$ *and* $(8, 3)$

(1)



Positive Slope

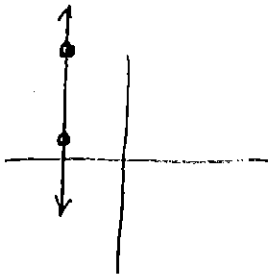
(2) $m = \frac{(3) - (0)}{(8) - (-3)} = \frac{3}{8+3}$

$= \boxed{\frac{3}{11}}$

or

$m = \frac{(0) - (3)}{(-3) - (8)} = \frac{-3}{-11} = \boxed{\frac{3}{11}}$

4. $(-5, 11)$ *and* $(-5, 2)$ Note: Not a function

① 

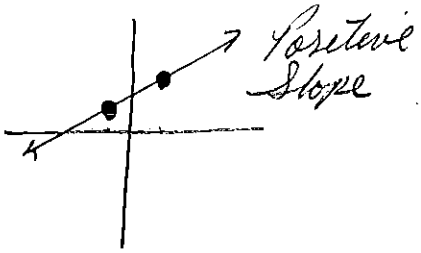
②
$$m = \frac{(2) - (11)}{(-5) - (-5)} = \frac{-9}{-5+5}$$

$$= \frac{-9}{0}$$

$$= \boxed{\text{Undef}}$$

$$= \frac{(11) - (2)}{(-5) - (-5)} = \frac{9}{0}$$

5. $\left(\frac{6}{7}, 3\right)$ *and* $\left(-\frac{2}{3}, \frac{1}{4}\right)$

① 

②
$$m = \frac{\left(\frac{1}{4}\right) - \left(\frac{3}{1}\right)}{\left(-\frac{2}{3}\right) - \left(\frac{6}{7}\right)} = \frac{\frac{1-12}{4}}{\frac{-14-18}{21}}$$

$$= \frac{-\frac{11}{4}}{-\frac{32}{21}} \quad \begin{matrix} K \\ C \\ F \end{matrix}$$

$$= -\frac{11}{4} \cdot -\frac{21}{32}$$

$$= \boxed{\frac{231}{128}}$$

or

$$m = \frac{\left(\frac{3}{1}\right) - \left(\frac{1}{4}\right)}{\left(\frac{6}{7}\right) - \left(-\frac{2}{3}\right)} = \frac{\frac{12-1}{4}}{\frac{18+14}{21}}$$

$$= \frac{\frac{11}{4}}{\frac{32}{21}} = \frac{11}{4} \cdot \frac{21}{32} = \boxed{\frac{231}{128}}$$