

**Foundations for College Algebra**  
**Spring 2016**  
**Quiz #6**

Name: Key Date: October 19, 2016

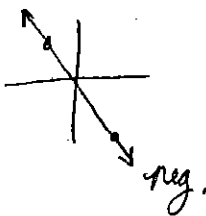
SHOW ALL WORK (NEATLY) ON QUIZ!

1. Complete the table of points that satisfy the equation.

x	$y = (x + 5)^2$	(x, y)
-8	$(-8 + 5)^2 = (-3)^2 = 9$	$(-8, 9)$
-7	$(-7 + 5)^2 = (-2)^2 = 4$	$(-7, 4)$
-6	$(-6 + 5)^2 = (-1)^2 = 1$	$(-6, 1)$
-5	$(-5 + 5)^2 = (0)^2 = 0$	$(-5, 0)$
-4	$(-4 + 5)^2 = (1)^2 = 1$	$(-4, 1)$
-3	$(-3 + 5)^2 = (2)^2 = 4$	$(-3, 4)$
-2	$(-2 + 5)^2 = (3)^2 = 9$	$(-2, 9)$

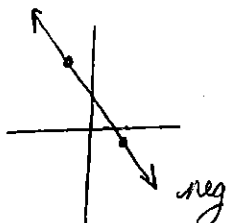
2. Calculate the following slopes passing the following ordered pairs of points:

a.  $(5, -6)$  and  $(-3, 4)$



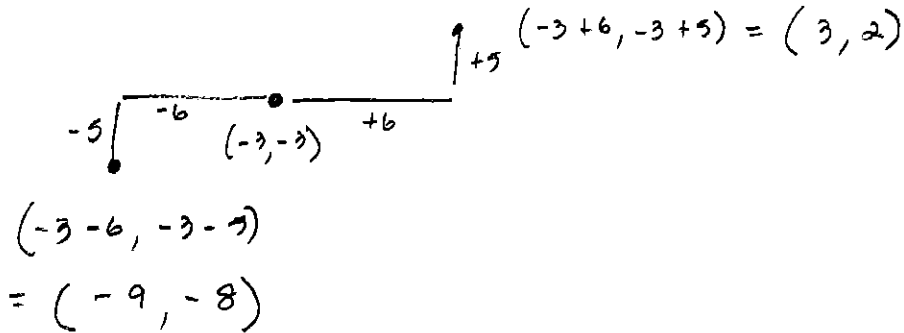
$$m = \frac{(4) - (-6)}{(-3) - (5)} = -\frac{10}{8} = \boxed{-\frac{5}{4}}$$

b.  $(-\frac{3}{4}, 5)$  and  $(2, \frac{1}{5})$

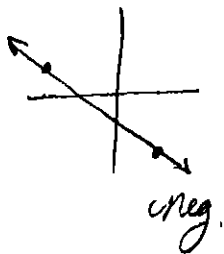


$$m = \frac{(\frac{1}{5}) - (5)}{(2) - (-\frac{3}{4})} = \frac{\frac{1 - 25}{5}}{\frac{8 + 3}{4}} = \frac{-\frac{24}{5}}{\frac{11}{4}} = -\frac{24}{5} \cdot \frac{4}{11} = \boxed{-\frac{96}{55}}$$

3. Given the point  $(-3, -3)$  and  $m = \frac{5}{6}$  find a point above and below the given point.



4. Find the equation, in *Slope-Intercept* form which passes through  $(3, -5)$  and  $(-7, 2)$ .



$$m = \frac{(2) - (-5)}{(-7) - (3)} = \frac{7}{-10} = -\frac{7}{10}$$

$$-5 = \left[-\frac{7}{10} \cdot 3\right] + b$$

$$-5 = -\frac{21}{10} + b \quad \left| \quad -\frac{29}{10} = b$$

$$-50 = -21 + 10b$$

$$-29 = 10b$$

$$\boxed{y = -\frac{7}{10}x - \frac{29}{10}}$$

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$$2 = -\frac{7}{10} \cdot -7 - \frac{29}{10}$$

$$= \frac{49}{10} - \frac{29}{10}$$

$$= \frac{20}{10}$$

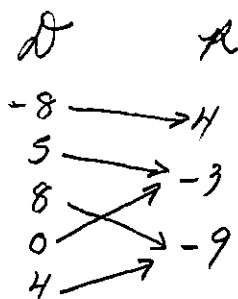
$$2 = 2 \checkmark$$

5. Given the following collection of order pairs: state the *Domain*, *Range* and determine if the *Relation* is a *Function*.

$$R = \{(-8, 4), (5, -3), (8, -9), (0, -3), (4, -9)\}$$

Domain:  $\{-8, 5, 8, 0, 4\}$  no repeats

Range:  $\{4, -3, -9\}$



$R$  is a function