

**Quiz #3**

MATH 105 – Amber Buntin – Fall 2015

Directions: Please **show as many steps as possible** while computing the following limits and use proper limit notation. Also, use **the average rate of change formula** for number 2..

1. (5 points each) Evaluate the following limit  $\lim_{x \rightarrow 3} \frac{-4x}{x-3}$  by computing the left and right-hand limits
- a.  $\lim_{x \rightarrow 3^-} \frac{-4x}{x-3}$
- b.  $\lim_{x \rightarrow 3^+} \frac{-4x}{x-3}$

c.  $\lim_{x \rightarrow 3} \frac{-4x}{x-3}$

2. (5 points) Compute **average rate of change**,  $f(x) = -3x^2 + 4x$ , from  $x = 2$  to  $x = 5$ .