

Name: \_\_\_\_\_

Panther ID: \_\_\_\_\_

Worksheet week 10

Calculus I

Fall 2014

1. Use l'Hopital's rule to compute each of the following limits (2.5 pts each):

(a)  $\lim_{x \rightarrow 0} \frac{\cos(5x) - \cos(3x)}{x^2}$

(b)  $\lim_{x \rightarrow +\infty} \frac{\ln x}{\sqrt{x}}$

(c)  $\lim_{x \rightarrow +\infty} (\sqrt{x} - \ln x)$

(d)  $\lim_{x \rightarrow 0^+} (1 + \sin(4x))^{\cot x}$