

Name: _____

Panther ID: _____

Worksheet 03/09

Calculus I

Spring 2017

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

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

(b) $\lim_{x \rightarrow +\infty} \frac{\ln x}{\sqrt[3]{x}}$

(c) $\lim_{x \rightarrow 0} \left(\frac{1}{x} - \frac{1}{e^x - 1} \right)$

(d) $\lim_{x \rightarrow 0} \left(1 + \sin(5x) \right)^{1/x}$