

Date: 10/25/13.

Instructor: Cody Clifton.

Name: _____

This 10-point quiz will test you on finding extrema and using l'Hôpital's Rule. Read carefully and always show your work. You have 15 minutes... good luck!

- (1) Find the absolute maximum value and absolute minimum value of $f(x) = 12 + 4x - x^2$ on the closed interval $[0, 5]$.

- (2) Find each of the following limits. Use l'Hôpital's Rule as many times as needed, but note that it may not be needed at all...

(a) $\lim_{x \rightarrow 0^+} \frac{\ln x}{x}.$

(b) $\lim_{x \rightarrow 0} \frac{e^x - 1 - x}{x^2}$