

Quiz Four

Math 101 - 142

Name: _____

ID: _____

Section: _____

Serial#: _____

1. Use l'Hôpital's rule to calculate the following limits.

(a) $\lim_{x \rightarrow 0} \csc x - \cot x$.

(b) $\lim_{x \rightarrow -\infty} x^2 e^x$.

2. A rectangle has its base on the x -axis and its top two corners on the curve $y = 1 - |x|$. What is the maximum area possible for such a rectangle?

3. You use Newton's method to approximate a value for $x = \sqrt[3]{7}$, with the initial estimate $x_0 = 1$. Calculate x_2 .