

Name: _____

Quiz 7

This quiz is graded out of 10 marks. No books, calculators, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. (5 marks) §3.7 #38 Find the limit. Use l'Hospital's Rule where appropriate. If there is a more elementary method, consider using it. If l'Hospital's Rule doesn't apply, explain why.

$$\lim_{x \rightarrow \infty} (e^x + x)^{1/x}$$

Question 2. (5 marks) §6.6 #32 Determine whether each integral is convergent or divergent. Evaluate those that are convergent.

$$\int_0^1 \frac{\ln x}{\sqrt{x}} dx$$