

Math 151 Quiz #2
October 6, 2009

Name: _____

Show all work. Simplify your answers.

1. Evaluate the following limits. **Show work or justify** your answers*. If the limit is infinite, determine if it is $+\infty$ or $-\infty$.

(a) (1 pt.) $\lim_{t \rightarrow 1} \frac{4t + 4}{3t^2 + 4t + 2}$

(d) (1 pt.) $\lim_{x \rightarrow 3^-} \frac{e^x}{|x - 3|}$

(b) (2 pts.) $\lim_{x \rightarrow -4} \frac{x^3 + 4x^2}{x^2 + x - 12}$

(e) (1 pt.) $\lim_{x \rightarrow 3^+} \frac{e^x}{|x - 3|}$

(c) (2 pts.) $\lim_{n \rightarrow 3} \frac{2 + e^n}{\sqrt{\sin(\pi n) + n + 1}}$

2. (3 pts.) For what values of x is $g(x)$ **continuous** if it is defined by $g(x) = \begin{cases} \frac{1}{x-1} & \text{if } x > 0 \\ x^2 - 1 & \text{if } x \leq 0 \end{cases}$?

*Note: Do not justify by using graphs or tables.