

NAME: \_\_\_\_\_

Math 200 Calculus I (Bueler)

16 April 2008

## Quiz #8

*20 points total. You have 20 minutes.*

1. (a) (5 pts) Find any vertical and horizontal asymptotes on the graph

$$y = \frac{e^{x/2}}{x^2 - 4}$$

State the limits associated to these asymptotes (i.e. " $\lim_{x \rightarrow a} f(x) = L$ ").

- (b) (5 pts) For the same equation as in part (a), find and state the critical numbers.

(c) (5 pts) Sketch the graph of the equation in part (a).

2. (5 pts) Compute the limit

$$\lim_{x \rightarrow 0} \frac{\sin^2 x}{1 - \cos x}$$