Math 124 Quiz #9 Name: _____

June 3, 2008

Show all work.

1. (4 pts.) Find the critical numbers of $f(x) = 5e^{\sin x} + 31$ on the interval $[0, 2\pi]$.

2. (4 pts.) Find the absolute maximum and minimum **values** of $g(x) = \frac{x}{2x^2+8}$ on the domain $[0, 8]$.

3. (2 pts.) Find **any** function $h(x)$ for which the derivative is $h'(x) = 3x^2 + 9$.