Name.....
UID.....

Math 1210-3
Quiz 5
February 15, 2008

Show all work for complete credit. There are two sides to this quiz!

Compute the following derivatives. Do not simplify your answers unless the question asks you to.

1) Find $D_x\left(x^3 + \frac{5}{x^2}\right)(4x + 5)$

(2 points)

2) Use the quotient rule to find $D_x\left[\frac{\cos(x)}{\sin(x)}\right]$, and simplify your answer to show that your computation reproduces the derivative formula for $\cot(x)$ which you have memorized.

(2 points)

3) Find $D_x\sqrt{x^2 + 1}$.

(2 points)

4) Find f '(t), for $f(t) = \left(t^2 + 3t + 4\right)^{11} \left(t^3 + \frac{1}{t^3}\right)^9$.

(2 points)

5) Find $D_t \left[\frac{\left(t^2 + 1\right)^{11}}{\sec(2t)} \right]$.

(2 points)