

Circle One:

Name: _____

11:00-11:55 (325)

3:30-4:20 (333)

Math211-2, Fall 2007

Quiz #4: 10-17-07

No Calculators. There are four problems.

1. (3 Points) Find $\frac{dy}{dx}$ in terms of x and y for the following equation: $y^2 + ye^{2x} + e^x = x$.

2. (3 Points) For $f(x) = \frac{2x}{x^2 + 1}$, find all the critical points and determine where the function is increasing/decreasing.

3. (3 Points) Determine where the graph of the function defined by

$$f(x) = 2x^3 + 6x^2 - 5x + 1$$

is concave up, concave down, and where there are any inflection points, if any.

4. (**Bonus**) (1 Point) Why did Wisconsin lose to Penn State last Saturday?