

Name: _____

Math 200 Calculus I (Bueler)

Spring 2006

Quiz # 9
Total of 25 points.

Due at beginning of class Thursday 20 April.

1. (5 pts) Perform one step of Newton's method to solve $x^4 = 1 + x$ using the starting guess $x_1 = 1$. That is, find x_2 .

2. (5 pts) Find the sum:

$$\sum_{i=1}^{79} i$$

3. (5 pts) Find the most general antiderivative of the function $g(x) = 3e^x + 7\sec^2 x$.

4. (a) (5 pts) Estimate the area under the graph of $f(x) = 1 + x^2$ from $x = -1$ to $x = 2$ using three rectangles and right endpoints.

(b) (5 pts) Consider the graph of $f(x) = 1 + x^2$ on the interval from $x = 2$ to $x = 7$. If you used 50 rectangles and right endpoints to estimate the area under the graph of this $f(x)$ on this interval, would your estimate be *larger* or *smaller* than the exact area, or would it be *equal* to the exact area? Why?