

NAME:

SECTION: (circle one) 11:00-11:55    12:05-1:00

Math 105 - Quiz 8 - November 7, 2005

Instructions: Show all of your work and circle your final answers. Calculators are allowed, but notes and books are not.

1. (10 pts.) The Newton's method formula is  $x_{n+1} = x_n - \frac{f(x_n)}{f'(x_n)}$ . Using Newton's method, compute the first two approximate values (to as many decimal places as your calculator gives) of  $\sqrt[3]{100}$  using an initial guess of  $x_0 = 4.5$ . Be sure to show all of your work.

2. (10 pts.) Find the point on the line  $y = -2x + 2$  that is closest to the point  $(0, 1)$ .