## Math 251: Pledged Set 10

Due: November 11, 2008

This is a pledged set. Therefore, no outside help from book, calculator, or other people.

- 1. What is the general formula for Newton's Method? Explain geometrically what Newton's Method does.
- 2. Use Newton's Method to get  $x_2$  for the equation

 $x^{5} + 2$ 

with  $x_1 = -1$ .

3. Find the antiderivative of

$$\sqrt[4]{x^3} + \sqrt[3]{x^4}.$$

4. Find f when

$$f'(t) = t^{-1/3}, f(1) = 1, f(-1) = -1$$

5. A particle is moving with the given data. Find the position of the particle when

 $a(t) = \cos(t) + \sin(t), \quad s(0) = 0, \quad v(0) = 5$