Name: _____ Math 231 Quiz 5

1. (5 pts) Use Newton's method with initial approximation $x_1 = -1$ to find x_2, the second approximation to the root of the equation $x^3 + x + 3 = 0$.

2. (5 pts) Find f if $f'(x) = x^2 - \sin x$ and $f(0) = 0$.

3. (10 pts) A box with a square base and open top must have a volume of 4000 cm^3. Find the dimensions of the box that minimize the amount of material used.