Math 251: Pledged Set 1

Due: September 9, 2008

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

1. What is a function? What are its domain and range?

2. What is an odd function? How can you tell if a function is odd by looking at its graph?

3. If $f(x) = x^2 - 3x + 1$, evaluate the difference quotient

$$\frac{f(a+h) - f(a)}{h}$$

4. Suppose that the graph of f is given. Describe how the graphs of the following functions can be obtained from the graph of f.

   - $y = f(x) + 1$
   - $y = f(x + 2)$
   - $y = 1 + 3f(x)$

5. Find the inverse function of $f(x) = x^3 + 1$.