

**Class 5:** *Monday, September 10*

Reading: *Anton, Bivens & Davis* Section 1.5

### **Inverse Functions**

We shall examine more closely the relationship between two variables through a functional relationship, i.e.  $y = f(x)$  from **both** directions, i.e.  $x = g(y)$  and classify the functions  $f$  and  $g$  as *inverses* of each other. Of particular interest will be the relationship between the domain and range of a function and its inverse function. We will also be interested in tests and techniques for determining when an inverse function exists and how to compute it explicitly when it does.

**Homework 4:** *Anton, Bivens & Davis* §1.5: 1, 5, 7, 8, 10, 10, 11, 18, 21, 24, 25

**Class 6:** *Wednesday, September 12*

Reading: *Anton, Bivens & Davis* Section 1.6

### **Exponentials and Logarithms**

A particular important example of a function-inverse pair is the natural exponential function  $e^x$  and the natural logarithm function  $\ln(x)$ . We will also review the rules of exponents and logarithms.

**Homework 5:** *Anton, Bivens & Davis* §1.6: 1, 2, 5, 6, 13, 16, 25, 29, 43, 49

**Lab 2:** *Thursday, September 13*

**Homework 3, 4 & 5 Due in the Math 110 Course Box by 5:00 pm Thursday September 13**

**Class 6:** *Friday, September 14*

Reading: *Anton, Bivens & Davis* Section 1.7

### **Mathematical Models**

We will begin our discussion of the application of mathematics to describe all sorts of natural and scientific phenomena, known as mathematical modelling.

**Homework 6:** *Anton, Bivens & Davis* Chapter 1 Review: 1, 6, 11, 15, 27, 33, 40

**Quiz 2 Take Home Quiz Due Monday September 17**