Test 3 Review
Fall 2006
MATH 111 Section 02

The exam will only cover material from sections 4.1 and 4.2. I encourage you to look at the write-up I did for graphing exponential functions which can be found by following the links to our course's home page at http://batty.shc.edu/ cmullikin. In addition, you should feel comfortable with the idea of an inverse in terms of finding them, proving that they are inverses, and graphing them. You should be able to do that for the following example (with the exception that I don't expect you to be able to graph $k(x)$):

$$1) \ f(x) = 2x + 3$$

$$2) \ g(x) = \frac{1}{x+3}$$

$$3) \ h(x) = \frac{2x+3}{x+3}$$

$$4) \ k(x) = (x^3 + 5)^7$$

$$5) \ q(x) = x^2 + 3 \text{ where } x \geq 0.$$

Also, given different representations for functions, you should be able to compute the value of a composition of functions. I'm thinking specifically of problems like 43 and 44 on page 289 of the text.

From section 4.2 I expect you to be able to solve equations involving exponentials using the fact that $a^{x_1} = a^{x_2}$ if and only if $x_1 = x_2$. These are problems like 1-10 in section 4.2. Given that I took the time to write up graphing techniques for exponential functions, you can expect to be asked to graph an exponential function.

If you have any questions on this please feel free to send me an email.