Homework Due Monday Febuary 12

All answers must be in the form of a sentence to get credit.

1. Read sections 11.1 and 11.2. The basic theme here is that by the fundamental theorem of calculus we can compute integrals $\int_a^b f(x)\,dx$ exactly if wee can find an antiderivative F of f. To be precise if $F'(x) = f(x)$ then $\int_a^b f(x)\,dx = F(b) - F(a)$. So we are now going to lean tricks for finding antiderivatives. We started this by finding the derivatives of $\ln x$, $\arcsin(x)$, $\arctan(x)$ which gives us the antiderivatives of the functions $1/x$, $1/\sqrt{1-x^2}$ and $1/(1+x^2)$. This is basically what is covered in section 11.1. In section 11.2 we will learn the method of substitution which is the antiderivative version of the chain rule.

2. Pages 621–622 #7, #18

3. Pages 632–633 #1, #2, #3

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