Reading Assignment for Section 5.3

MATH 131: Calculus II, Sections 2 and 3
Fall Semester 2015

Follow the general guidelines for the Reading Assignment (the salmon colored handout). Be sure to include and label all four standard parts 1,2,3,4 of the Reading Assignment in what you hand in. Be sure to **staple** together pages if you have more than one, and include your **name** at the top of at least the first page. Neatness is appreciated!!!

Due: by the beginning of class on Wednesday, September 9th

Read:

Section 5.3, pages 362-372: FUNDAMENTAL THEOREM OF CALCULUS

Notes:

In this section we will learn about the area function. This builds up to the moment we all have been waiting for since the beginning of Calculus I: The Fundamental Theorem of Calculus!!! Be sure to work through the ideas of Example 2 very carefully. That example gives a good basis for why the Fundamental Theorem might make sense.

Remember that your answers should include complete sentences for every question. Be sure to address all parts of each question.

Reading Questions for part (1):

a) Let $f(x) = 6$. Note that this means that f is a constant function. Explain why an area function of f is an increasing function. Including a diagram in your explanation would be helpful.

b) Explain in words **without formulas** what the Fundamental Theorem of Calculus tells us. Try to use your own words first. If you use any quotes directly from the text, be sure to cite them.

c) Why can the constant of integration be omitted from the antiderivative when evaluating a definite integral?

Remember parts 2-4 on the salmon handout!