Reading Assignment for Section 5.4
MATH 131: Calculus II, Section 1
Spring Semester 2014

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, February 5th

Read:

Section 5.4, pages 349-354: Working with Integrals

Notes:

In this section we will learn that if a function has the property that it is even or odd we can use it to our advantage when evaluating definite integrals. We will also learn how to determine the average value of a function and what that means. Lastly, we will look back at some old friends - the Mean Value Theorem and the Extreme Value Theorem - and see what they can tell us about integrals.

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) State the rules for evaluating definite integrals on certain kinds of intervals with even and odd functions (See Theorem 5.4.). Then describe in your own words why these rules makes sense. Diagrams would be helpful to assist in your explanation.

b) Explain how to find the average value of a function on an interval $[a, b]$ and why this definition is analogous to the definition of the average of a finite set of numbers.

c) There are some examples about finding the average value of a function in the text. Using those ideas or another from the exercises or your own thoughts, describe why it might be useful to know what the average value of a function is.

Remember parts 2-4 on the salmon handout! **Reread the directions for these parts to be sure that you are answering the questions.** If you have lost your salmon handout, there is a link on our website to the Homework Guidelines.