Reading Assignment for Section 9.1
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 expected!!!

Due: by the beginning of class on Monday, December 7th

Read:

Section 9.1, pages 661-671: Approximating Functions with Polynomials. Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 9.1!

Notes:

The moment you have all been waiting for! Now we can start figuring out how we can represent functions (especially functions that are difficult to integrate) by series! Our series will start having variables in them, not just constants. In particular, we will be interested in using polynomials (nice functions!), indeed infinite polynomials, to represent hard functions.

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) What is a power series? How is it different from the other series we have been looking at? Remember to explain in full sentences.

b) Why would we want to approximate a function with a polynomial? Why does it make sense that we can? What does this have to do with first semester calculus? Remember to explain in full sentences.

c) Does the accuracy of a Taylor polynomial generally increase or decrease with the order of the polynomial? Explain. Remember to explain in full sentences.

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.