Reading Assignment for Section 9.2

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, April 30th

Read:

Section 9.2, pages 602-609: Properties of Power Series. Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 9.2!

Notes:

In this section we extend the ideas of the previous section where we looked at finite Taylor polynomials. Now we will look at infinite polynomials, i.e. power series! We look at when they are convergent, how we can use them to represent functions, and more!

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) Write out the first four terms of a power series with coefficients $c_0 = 2$, $c_1 = 4$, $c_2 = 6$, and $c_3 = 8$. Explain why you know you are right.

b) Explain why a power series is tested for **absolute** convergence. See if you can find more than one reason that could make this so.

c) Do the interval and radius of convergence of the power series change when the series is differentiated or integrated? Explain carefully.

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.