

# Reading Assignment for Section 8.5

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 Friday, April 18th

Read:

Section 8.5, pages 569-575: The Ratio, Root and Comparison Tests. Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 8.5!

Notes:

In this section, we continue to learn different techniques to help us determine whether or not different series converge or diverge. Two of these new techniques involve looking at the general term of the series and manipulating it in some way to a form that is easier to deal with. The other two let us compare the series we are interested in with a series for which determining convergence or divergence is easier (similar to the ideas of the comparison test for improper integrals we used on the Week 11 Lab).

**Remember that your answers should include complete sentences for every question (this time, there is an exception to this - you do not have to write sentences for c and e, but you should show your work!). Be sure to address all parts of each question.**

Reading Questions for part (1):

- a) How does the Ratio Test work? What kinds of series it is especially useful for? Is it ever not helpful?
- b) What is the Comparison Test? Explain how and why it works in both diagrams and words.
- c) Make a flow chart for solving series questions similar to the one I gave you for integration. Include all the techniques discussed from Sections 8.3-8.5. Remember that this should include questions that lead you to different techniques, and that this should be a guideline realizing that there are always exceptions. The "Guidelines" at the end of this section is a good place to check your ideas for the chart, but it would be useful to your understanding to see how much you can put together without using those guidelines first.

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.