

Reading Assignment for Section 7.1

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, March 5th

Read:

Section 7.1, pages 453-457: Integration by Parts! Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 7.1!

Notes:

Now we plunge into Chapter 7 to learn a new set of integration techniques to add to our tool box! This first technique is especially helpful in expanding the kinds of functions for which we can calculate volumes and find other values for different kinds of applications. Remember that each method is undoing something we did with differentiation. There is not a one-to-one correspondence between differentiation and integration techniques, but you should look for connections between the processes.

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) (i) What differentiation rule does integration by parts work to undo? (ii) For what types of integrands is integration by parts useful?

b) Give an example calculation which shows that $\int f(x)g(x)dx = \int f(x)dx \cdot \int g(x)dx$ is NOT true in general. Then give an example calculation showing what we can sometimes do instead to calculate $\int f(x)g(x)dx$ using the method of this section.

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.