Reading Assignment for Section 6.7

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 Friday, October 9th

Read:

Section 6.7, pages 459-467: Physical Applications! Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 6.7!

Notes:

In this section we investigate some physics related applications. Mainly we will investigate how we determine work when the force applied is variable. Guess what? We still start the derivation of the formulas for these applications by partitioning our interval into subintervals and by looking at smaller pieces that we sum together to estimate the whole!

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) Explain how to find the mass of a one-dimensional object with a variable density ρ. Do not just give a formula; explain where it comes from.

b) What is the reason why we may have to use integration to find the work done in moving an object? Doesn't "Work = Force times Distance" always work? Explain briefly.

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.