Reading Assignment for Section 7.3

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 Wednesday, October 21st

Read:

Section 7.3, pages 523-529: Trigonometric Integrals! Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 7.3!

Notes:

How do we integrate functions that are products of powers of trigonometric functions? In this section you will find tools for how to solve such integrals! Don't be shy of the trigonometric functions! We find ways to use some old formula friends to rewrite these integrals to look like easier algebraic functions! Great puzzles!

Remember that your answers should include complete sentences for every question unless otherwise noted. Be sure to address all parts of each question.

Reading Questions for part (1):

a) List the five trigonometric formulas that are useful for integrating products of powers of trigonometric functions (I am NOT referring to the reduction formulas here). For each, note one **specific** example when you might want to use that formula (make sure it is clear which example goes with which formula). You do not need sentences for this question.

b) Explain how you would evaluate $\int \cos^3 x \, dx$. That is, explain in full sentences the steps you would follow.

c) Show that the two solutions in Example 4 (a) on page 528-529 are equivalent. Do not reintegrate the function! Use the hint in the text!

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.