

Reading Assignment for Section 7.5

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 28th

Read:

Section 7.5 pages 541-548: Partial Fractions! Do the Quick Checks along the way! Check your answers to them at the end of the Exercises for Section 7.5!

Notes:

Like in the previous sections with other techniques, the technique of partial fractions can only be used on functions of certain forms (what forms are those???). It turns out that to apply this technique, we do quite a bit of algebra and not so much calculus! So get ready to do some algebra!

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) Give an example of a function that can be integrated using partial fractions, and then another example of a function that cannot. In general, to what kinds of functions can the method of partial fractions be applied?

b) Give an example of a function that has:

- (i) a simple linear factor.
- (ii) a repeated linear factor.
- (iii) a simple irreducible quadratic factor.
- (iv) a repeated irreducible quadratic factor.

(That is, show one function for each part, and identify the feature requested.)

c) What is the first step we must do in order to integrate $\frac{6x^2 - 3x + 5}{7x - 4}$? Explain why.

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.