Reading Assignment for Section 4.1

MATH 130: Calculus I, Sections 2 and 3
Fall Semester 2013

Follow the general guidelines for the Reading Assignment (the salmon colored handout). Be sure to include and label all four standard parts a,b,c,d 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** and which **section** of calculus you are in at the top of the page. Neatness is appreciated!!!

Due: at the beginning of class on Wednesday, October 30th

Read:

Section 4.1, pages 223-229: Maxima and Minima!

Notes:

In this chapter we will continue to think about what information the derivative can give us. This first section focuses on how the derivative can help us find places where our function has extreme values – locally and globally.

Remember that your answers should include complete sentences for every question.

Reading Questions for part (a): (Note that answers to these need not be long. One or two complete sentence will suffice for all except perhaps 6.)

1. Explain in **your own words** what a local maximum is.

2. What do we need to know about a function to know that it has an absolute maximum or minimum?

3. What is a critical number?

4. Is it true that if f has a local maximum or minimum at c, then $f'(c) = 0$? Explain.

5. Is it true that if $f'(c) = 0$, then f has a local maximum or minimum at c? Explain.

6. Is there a way to try to find the maximum and minimum values of a function on a closed interval? Explain.

Remember parts b-d on the salmon handout!