

Reading Assignment for Sections 2.1 and 2.2

MATH 130: Calculus I, Section 4
Spring Semester 2017

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 the page. Neatness is appreciated!!!

Due: at the beginning of class on Friday, January 27th

Read:

Section 2.1, pages 54-58: The Idea of Limits, AND

Section 2.2, pages 61-65: Definitions of Limits

Notes:

Yay! Calculus!!! Now we begin the new material! Limits are important in many ways! ALL the main ideas of calculus are described in terms of limits, so it is vital that we understand limits first. We can use graphs, tables and equations to evaluate and understand limits. In these sections we focus on the first two: graphs and tables. The question we ask as we evaluate limits is “what is happening to our y -values as our x -values approach certain numbers (and sometimes from certain directions)?”.

Remember that your answers should include complete sentences for every question. Be sure to answer all parts of each question! There are fewer questions this time, so your response to each should be a bit longer.

Reading Questions for part (1), Response:

- a) Describe a process for finding the slope of the line tangent to the graph of f at $(a, f(a))$. Include a picture in your description. (Note that this is described in Section 2.1.)
- b) Is the following statement true or false: “When $\lim_{x \rightarrow a} f(x)$ exists, it always equals $f(a)$.”? **Explain** your answer carefully. (Use the diagrams in Section 2.2 to help you understand this as well as the words!)
- c) What pitfalls are we warned about in Section 2.2, both in relation to graphing utilities and in relation to tables? Explain each.

Remember parts 2-4 on the salmon handout!