Reading Assignment for Section 3.3

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, February 24th

Read:

Section 3.3: Rules of Differentiation, pages 144-150

Notes: It is important to know where the definition of the derivative comes from - DON'T FORGET IT! However, it can be used to prove short-cuts to finding the derivative so that we don't have to calculate limits every time we want to know a derivative. We STILL need to know the definition though (including for your next exam!) – it is **important** for our **understanding** of what the derivative is.

Remember that your answers should include complete sentences for every question. Be sure to answer all parts of each question!

Reading Questions for part (1), Response:

a) (i) What is the Constant Rule? (ii) Why does this make sense? (Use terminology from our discussions on Section 3.1.)

b) (i) What other derivative rules did you learn about in this section? (ii) Show a brief example that shows how you apply each one. (This can be one example that incorporates all of the rules or a few examples that each highlight a different rule. Make it clear where you apply each rule (using words). **Try making up examples that are different from the text.**)

c) (i) What did you read about in this section that is so special about the function $f(x) = e^x$? (ii) How is e defined? (iii) Show how you can prove the derivative formula for $f(x) = e^x$.

Remember parts 2-4 on the salmon handout!