

Main Exercises Week 10

MATH 130: Calculus I, Section 2 & 3

Your Name (Print): _____

Follow the general guidelines for the Main Exercises assignments (the salmon colored handout). Be sure to **staple** together your pages if you have more than one, and include your **name** at the top. Neatness is appreciated, makes a good first impression, and can earn you a bonus point!!!

Due: at the beginning of class on Friday, March 30th

Remember: Your write-up should be **your own**. You may discuss these problems with others, but **you should be alone when you write them up**, using only outlines of any group or Intern discussions. **EXPLAIN** and **SHOW YOUR WORK!!!** Final answers will not receive full credit without supportive explanations. You may use your own paper on which to write these up.

1. Find the derivatives of the following functions. Simplify your answers by eliminating negative exponents and fractions within fractions, and cancelling where clearly possible.

(a) $f(x) = x^9 \log_8(\arctan(e^{x^6}))$

(b) $y = (\ln x)^{\sin x}$

2. Complete Section 3.10 Exercise 52 on page 222 in our text. Be sure to show every step and explain your work! Your process matters more than your final answer!