

Section 3.8: Implicit Differentiation

MATH 130: Calculus I

Due: Wednesday, March 13, 2019 at 12:20pm

Name (Print): _____

After reading Section 3.8 (pages 201-204 in the text), respond to the following questions **on this handout**. Be sure to staple your pages together before turning it in. **You must answer all parts to all questions to earn full credit!!!** See the salmon homework guidelines handout for details. You are encouraged to take additional notes wherever you are keeping your class notes.

Response Section

1. (a) What is the difference between an equation that explicitly relates two variables to one another and an equation that implicitly relates two variables? Answer using a full sentence.

(b) Give two examples of equations in explicit form.

(c) Give two examples of equations in implicit form.

2. Why might we want or need to use implicit differentiation?

3. Suppose we are differentiating implicitly and we want to find the second derivative of y with respect to x , $\frac{d^2y}{dx^2}$. What are the main steps that we need to do? In particular what is different about finding the second derivative in implicit differentiation from finding the second derivative explicitly?

Questions/Exercise Section

4. Write down at least two questions you have on the reading. OR if you have NO questions, do exercise 28 in Section 3.8 (page 205). Be sure to show all steps for full credit! See the salmon homework guidelines handout for details.

Reflection Section

5. Write **two or three** sentences reflecting on the process of your recent work in the course. See the salmon homework guidelines handout for details.

Time Section

6. How much time did you spend on this reading assignment? _____