

Part I (due at the beginning of class Friday, October 10)

On the blue Higher Derivatives handout you got at the end of class on Wednesday, read the things above Example 1 and then do Example 1. Then stop.

Make sure to bring your Rates of Change handout to class Friday as well as we'll finish that one, but you do not need to do anything on that handout before class.

Part II: WeBWorK (due Saturday, October 11, by 11 PM)

[Click here](#) for your WeBWorK assignment. Complete the DW 16 WeBWorK assignment.

Part III: Homework Problems (due Friday, October 10 at the beginning of class)

1. Suppose that $f(x)$ is differentiable. Find the derivative of each of the following functions.

(a) $x^2 f(x)$

(b) $\frac{f(x)}{x^2}$

(c) $\frac{x^2}{f(x)}$

(d) $\frac{1 + x^3 f(x)}{\sqrt{x}}$

Bonus: The Product Rule is a rule for finding the derivative of a product of two functions. Using the standard Product Rule, prove a Triple Product Rule that tells you how to differentiate a product of three functions, e.g., $f(x)g(x)h(x)$. Illustrate your rule with two examples.

Friday's mini-Celebration of Learning

Friday's mini-Celebration of Learning will include questions on learning targets D3, D4, and D5.