Homework Set 4

DUE: OCT 2, 2019 (AT THE BEGINNING OF CLASS)

To be handed in:

Please write your solution to Problem 1 on a single sheet of paper!

1. Compute the following partial derivatives of the function

$$f(x, y, z) = e^{\sqrt{x^2 + y^2}} + 3xyz \cos(x^2 z)$$

    a) $\dfrac{\partial f}{\partial x}$

    b) $\dfrac{\partial f}{\partial y}$

    c) $\dfrac{\partial f}{\partial z}$

    d) $\dfrac{\partial^2 f}{\partial x \partial z}$

    e) $\dfrac{\partial^2 f}{\partial y \partial z}$

NOT to be handed in (but recommended for you to practice with):

2. Textbook (5th edition) Section 12.5, Exercises 1-5

3. Textbook (5th edition) Section 13.1, Exercises 19-24, 45-48

4. Textbook (5th edition) Section 13.2, Exercises 9-16, 27-29

5. Textbook (5th edition) Section 13.3, Exercises 9-15, 65-67, 122, 125, 126