

## Advanced Calculus 425.1



### Homework 2



*Due Thursday February 6, in class.*



**0.** Read the book: 5.4, 5.5 and the notes: Chapters 0 and 5.



**A.** Do the problems

- section 5.3, problems 6, 7, 8.
- section 5.4, problems 1cd, 2, 10.



**B.** Answer the following questions.

**B1.** (a) What is the differentiation in one variable about, i.e., what is the idea that it captures.

(b) How is differentiation of functions of several variables different from the differentiation of functions of one variable?

**B2.** (a) What is integration about?

(b) For the abstract idea of integration of functions over some space  $X$  list the steps in the procedure as described in class.