

## Math 4220: Homework 0

This is the zeroth homework assignment for Math 4220. I have broken the homework assignment into two parts. It should be noted that this homework is slightly shorter than subsequent assignments. Part I has exercises that you should do (and I expect you to do) but you need not turn in. These exercises are given for you to gain a good working knowledge of things; they will generally be easier than the exercises from the second part of the homework. The exercises in the second part of the homework are exercises you should write up and submit via Gradescope. Your solutions should be consistent with the directions in the syllabus. If you get stuck on any part of the homework, please come and see me. More importantly, have fun!

**Part I** (Do not write up)

*Exercise 1.* Read Pages 1-22 of the course textbook.

*Exercise 2.* Do Exercises 1, 3, 5, 7, 14, 15, 23, and 26 in Section 1.1 of the textbook.

*Exercise 3.* Do Exercises 1, 4, 7, 8, 9, 10, 13, and 14 in Section 1.2 of the textbook.

*Exercise 4.* Do Exercises 1, 8, 10, 13, and 17 in Section 1.3 of the textbook.

**Part II** (Write up and Submit via Gradescope)

*Exercise 0* (Gradescope). Please add the course in Gradescope. The Entry Code is YVZ25Y.

*Exercise 1* (Introductions). With the aim of getting to know all of you, please answer the following questions.

- a. What is your preferred name, i.e., what should I call you in class?
- b. What is an interesting fact about you?
- c. Why are you taking this course? If your answer is “It’s required for my major”, what major are you referring to?
- d. Beyond mathematics, what subject is most fascinating to you?
- e. What was the last math class you took? How did you like it?
- f. What role do you think complex analysis will play in your life after this class?
- g. Is there anything you wish me to know about you as a student of complex analysis?<sup>1</sup>

*Exercise 2.* Please do Exercise 30 in Section 1.1 of the textbook.

*Exercise 3.* Please do Exercise 15 in Section 1.2 of the textbook.

*Exercise 4.* Please do Exercise 28 in Section 1.3 of the textbook.

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<sup>1</sup>e.g. “I cannot see orange, so don’t use that chalk color/marker,” etc.