## Math 200a Fall 2020 Homework 4

## Due 10/30/2020 by 7pm on Gradescope

Reading: Read Chapter 5 in the text, and begin to read Chapter 6. Note: Section 5D is optional reading, it won't be covered in the lectures or homework.

Exercises from Isaacs to write up and hand in:

Chapter 4: 4.1, 4.2, 4.3, 4.4, 4.6.

Chapter 5: 5.1, 5.2, 5.3, 5.5.

Note: for Exercise 4.6 the group you want to act by is the rotation group of the cube. In Chapter 1 the author outlined a proof that this group is  $S_4$ , by showing that a rotations correspond to permutations of the 4 major diagonals of the cube. You can assume that the rotation group is  $S_4$ .