

Problem Set 11

Due: Thursday, April 12

Work all of the following problems. A subset of the problems will be graded. Be sure to adhere to the expectations outlined in the *General Problem Set Guidelines Sheet*.

Unless otherwise stated, all problems can be found in the appropriate *Exercises* sections of the text (*Abstract Algebra* by D. Dummit and R. Foote, 3rd Edition).

- Section 4.5 # 20, 21, 22, 25, 32, 33
- Section 4.6 # 1 *Hint*: Suppose such a subgroup exists, and consider the action on left cosets given by multiplication.