

Math 103A Fall 2006 HW 5

HW Due 10/27/05 in class

All exercise and page numbers refer to Gallian, 6th edition.

0. These exercises are suggestions for extra practice at home (or in section) and are *not to be turned in!*

Gallian Chapter 9, #7, 11, 17, 37.

Gallian Chapter 10, #1, 5, 7, 31.

1. Do Gallian Chapter 9, #4, 10, 12, 14, 16, 18, 36, 70.

2. Do Gallian Chapter 10, #2, 10, 32.

Hints and comments:

#9.36: There is exactly one possible subgroup of index 2. Find it, then think about how to show it is the only one.

#9.70: Begin by writing down a set of 12 elements in G that looks like they should form a group, and prove that they do using that H is normal. Then you also have to prove that the 12 elements you wrote down are really all different.