

Math 113(4) - Comments for HW7

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Some general comments:

1. Please use staplers or clips, not just fold the left-upper corner of papers!
2. Try to write well! - maybe this will be harder than the first one...
3. If you can, try to use \LaTeX .
4. For questions that requires proofs, I almost not give any partial credits.

Problem 1

1. (a) is easy.
2. For (b) and (c), you have to describe the group as a product of (finite) cyclic groups. For example, in case of (b), the group is isomorphic to \mathbb{Z}_4 . 2 points for the correct list of elements, and 2 points for the description of group structure. Since both (b) and (c) are cyclic groups, you only need to find a generator of each group. If you only give answers without reasons, I deducted 1 point for each. If you only give group tables, I deducted 1 point for each, too.

Problem 2 (Section 13, Exercise 47)

Use Lagrange's theorem.

Problem 3 (Section 14, Exercise 30)

Apply Lagrange's theorem for $aH \in G/H$.

Problem 4 (Section 14, Exercise 35)

3 points for proof and 2 points for an example.