Math 345-60 Abstract Algebra I

Exam 1 Preparation

1. Is this a group? See problems 3, 12, 13, 14 in Section 4, problem 45 in Section 6.

2. Verify whether or not a function $\phi : G \rightarrow H$ is a group isomorphism. See problems 3, 5, 7, 8 in Section 3 and problem 10 in Section 4.

3. Prove that a pair of groups is non-isomorphic. See problems 10 and 20 in Section 8 and examples 3.16 and 3.17.

4. Factor a permutation into disjoint cycles and into transpositions. See problem 11, Section 9.

5. Let $G$ be a cyclic group. Find the number of subgroups of a given size. See problem 55, Section 6.