

Math 113 Homework # 6, due 3/13/03 at 8:10 AM

1. Fraleigh section 11 exercises 4, 6, 20, 38, 46.
2. (a) Use the fundamental theorem of finitely generated abelian groups to list all abelian groups of order 16, up to isomorphism. (There are 5 of them.)
(b) Show directly (without using the fundamental theorem) that none of these 5 groups is isomorphic to any of the others. Suggestion: consider the orders of elements in these groups.
3. Fraleigh section 13, exercises 4, 5, 8, 9, 12, 24, 32, 49, 52.
4. How challenging did you find this assignment? How long did it take?