

Math 128a, problem set 10

Outline due: Wed Apr 22

Due: Mon May 04

Last revision due: TBA

Problems to be done, but not turned in: (Ch. 11) 3, 7, 11, 15, 21, 27, 29; (Ch. 12) 1, 3, 9, 13, 15, 17, 19, 25, 41, 49.

Fun: (Ch. 12) 33.

Problems to be turned in:

1. (Ch. 10) 54.
2. Find all abelian groups (up to isomorphism) of order 720.
3. Let $G = Z_2 \oplus Z_4 \oplus Z_4$, and consider the subgroup $N = \langle (1, 2, 1) \rangle$ of G . As we saw in PS08, G/N is a finite abelian group. Determine the isomorphism class of G/N (see p. 217 for a definition), with proof.
4. (Ch. 12) 6.
5. (Ch. 12) 24.
6. (Ch. 12) 42.
7. (Ch. 12) 50. (Suggestion: Consider $(a + b)^2$ and similar expressions.)