Final study guide

Cumulative Final

The final is cumulative. Review the topics from Test 1 and Test 2 and the information below.

Topics from after Test 1 and Test 2

- Computation: Examples on 11/19 slide 7 where we classified the abelian groups of size 180 and 539,539 up to isomorphism.

- Review these HW problems:

  4.4 # 2
  4.5 # 5, 13, 30
  5.2 # A, B
  5.4 # A

- Look at the problems from class where we classified a group of a certain size.

  - Example from 11/14 slides 2,3,4 – A group of size 15 is cyclic.
  - Example from 11/14 slides 5,6 – A group of size 255 is abelian.
  - Example from 11/21 slides 9,10,11 – Classify the groups of size 45 up to isomorphism.

- Know these proofs from class. One of them will be on the final.

  - Lecture 10/15 slide 6 – Let G be a group of size p^alpha where p is prime and alpha >= 1, then | Z(G) | > 1.

  - Lecture 10/15 slide 8 – Let G be a group of size p^2 where p is prime, then G is abelian.

  - Lecture 11/7 last slide – The theorem about n_p with two parts.

  - Lecture 11/21 slide 3 – G is abelian iff G' = {1}

  - Lecture 11/21 slides 4,5,6,7,8 – Theorem with 3 parts about G'.