

Study Guide for Exam 3

You are still responsible for all of the material from Exams 1 and 2. This study guide is not guaranteed to be comprehensive.

Definitions you should know

Centralizer, $Z(y)$
Conjugacy Class, \bar{y}
Normal Subgroup
Factor Group (also called the Quotient Group) G/H
Homomorphism
Monomorphism
Epimorphism
Isomorphism
Isomorphic Groups, $G \cong K$
Automorphism
Kernel, $\ker(\phi)$

Theorems You Should Know How to Prove and Use

Theorems 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 12.1, 12.2, 12.3, 12.4, 12.5, 13.1 from the book.
All theorems we proved in class or on a worksheet.

Theorems You Should Know How to Use

Theorems 10.8, 11.7.

Methods of Proof You Should Know

Proving:

A subgroup is normal

A mapping is a (i) homomorphism, (ii) monomorphism, (iii) epimorphism, and/or (iv) isomorphism.

Two groups are isomorphic