Abstract algebra

University of Houston - MATH 3330

Spring 2021

Textbook: Saracino - Abstract algebra: A first course, 2nd edition

Chapters covered:

*The contents in these notes do not correspond exactly to the textbook

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1 Section 1

1.1 Basics

1.2 Binary operations

Definition 1.1: Algebraic structures

A **semigroup**.

A **monoid**.

A **group**.

An **abelian group**.

1.3 Elementary number theory

1.4 Subgroups

1.5 Cyclic groups

1.6 Subgroups generated by a set

1.7 Direct Products

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3 Section 3

3.1 Lagrange's theorem

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4 Section 5