

MATH 412 Abstract Algebra I
Practice Problem List (last updated August 17)

Chapter 1: Arithmetic in \mathbb{Z} Revisited

- Section 1: 6, 7, 8, 9, 10
- Section 2: 16-27.
- Section 3: 21, 23, 25, 26, 30

Chapter 2 Congruence in \mathbb{Z} and Modular Arithmetic

- Section 1: 11, 12, 14, 15, 16, 20,
- Section 2: 14, 15, 16,
- Section 3: All problems on pg 41-42

Chapter 3

- Section 1: 20-29, 35, 36, 29, 43
- Section 2: All problems on pg 80-82
- Section 3: 16-23, 30, 35, 38

Chapter 4

- Section 1: 11, 12, 13, 15, 16, 18, 20
- Section 2: 7, 8, 9
- Section 3: 15, 16, 20, 21, 22, 23
- Section 4: 12, 13, 15, 16, 17, 18, 23, 24, 27, 28
- Section 5: All Type A problems on pg 119
- Section 6: All Type A problems on pg 123

Chapter 5

- Section 1: 8-13
- Section 2: 5-11
- Section 3: 2-12

Chapter 6

- Section 1: 1-3, 8-13, 15-23, 24-32, 36, 37, 38, 40-43
- Section 2: 1-8, 10, 11, 12, 16, 17, 18
- Section 3: 1-9, 10-12, 15, 17, 18

Chapter 10

- Section 1: all problems
- Section 2: 1-21
- Section 3: TBA