

Review for Math 2300 Quiz 2, Spring 2019

Chapter 4, Sections: 1, 2, 3, 6 (Contrapositive only)

Chapter 5, Sections: 1, 2, 3

You may bring one the PMI handout. You may write on it in your own handwriting. This is intended as a guide and not meant to exclude anything unless explicitly stated.

Chapter 4:

Definitions

Even, odd, prime, composite, rational, integer division

Proofs

Direct and Contrapositive

Counterexamples

Covered in Sections 1, 2, 3, 6

You may NOT use proof by contradiction

Chapter 5:

Understand the definitions of:

Sequence

Summation notation

Recurrence

Recursive definition

Sequences

Find formula, given the terms (must specify index set)

Write recursive definition, given the terms

Formulas for arithmetic and geometric finite sums

$$\sum_{i=1}^n i \qquad \sum_{i=0}^n r^i$$

Sequences that you should know and recognize

n!

powers of 2

squares

Induction proofs (5 numbered steps)

Formulas for sums

Divisibility

Inequalities

Formula for a recursively defined sequence