## Review for Math 2300 Quiz 2, Spring 2018

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:

Define
Sequence
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

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

Sequences that you should know and recognize
n!
Towers of Hanoi
Fibonacci
Induction proofs (5 numbered steps)
Formulas
Divisibility
Inequalities
Formula, given recursive definition of a sequence

