

# Math 101: Final Review

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Below is an overview of the topics that we covered this semester. While I have attempted to be as complete as possible, the list *may not* be exhaustive. The safe bet is that if homework was assigned on a topic, then it is fair game for the final.

**Chapter 1** Problem Solving: Techniques for problem solving; Scientific notation.

**Chapter 2** Logic: Truth tables and laws of logic; logical equivalence and tautologies; Valid and invalid arguments.

**Chapter 3** Numeration Systems: Early systems: Roman, Egyptian and Babylonian; Place value; Converting between base 10 numerals and other number bases.

**Chapter 9** Financial Mathematics: Simple and compound interest; Add-on interest and installment buying; Annuities and Amortization; Present and future value.

**Chapter 10** Set Theory and Counting Techniques: Set operations and Venn diagrams; Permutations, Combinations and the Fundamental Counting Principle.

**Chapter 11** Probability: Finding the probability; Odds for and against; Expectation.

**Chapter 12** Statistics: Frequency and graphs; Measures of Central Tendency (mean, median and mode); Measures of Dispersion (range, variation and standard deviation).

## Formula sheet

You will be allowed to use a *three by five* index card for formulas and notes. You may use both sides of the card. Do us both a favor and use a three-by-five card (I have some, if you are unable to get your hands on one), as I will not accept a larger substitute.