

**HOMEWORK FOR MATH155, DISCRETE STRUCTURES
SPRING 2011
WITH DR. CHRISTOPHER E ELMER
USING *FINITE MATHEMATICS*, YOUNG ET. AL.**

To be successful in learning mathematics one should work as many problems as possible. You are expected to have a complete understanding of the following list of problems.

Linear Functions

- 1.1 Cartesian Plane: 1 - 17.
- 1.2 Lines: 1 - 58.
- 1.3 Modeling: 1 - 35.
- 1.4 Two Lines: 1 - 28.

Linear Systems

- 2.1 Models: 1 - 13.
- 2.2 One and None: 1 - 32.
- 2.3 Infinitely Many: 1 - 36.

Matrix Algebra

- 3.1 Addition: 1 - 14, 22 - 33.
- 3.2 Multiplication: 1 - 42.
- 3.3 The Inverse: 1 - 40.

Linear Programming

- 4.1 Modeling: 1 - 20.
- 4.2 Inequalities: 1 - 40.
- 4.3 Graphical Solutions: 1 - 30.

Simplex and Linear Programing

- 5.1 Slack: 1 - 36.
- 5.2 Simplex: 1 - 36.
- 5.3 Minimum: 1 - 30.
- 5.4 Dual: 1- 16.

Sets and Counting

- 7.1 Logic: 1 - 24.
- 7.2 Truth Tables: 1 - 31.
- 7.3 Sets: 1 - 40.
- 7.4 Venn: 1 - 26.
- 7.5 Counting: 1 - 31 odd.
- 7.6 Permutations: 1- 47 odd.
- 7.7 Combinations: 1- 33 odd.

Probability

- 8.1 Sample - Equality: 1 - 29 odd.
- 9.1 Mutually Exclusive: 1 - 31 odd.
- 9.2 Conditional Prob: 1 - 23 odd.

Finance

- 6.1 Interest: 1- 38.
- 6.2 Annuities: 1 - 21.
- 6.3 APR: 1 - 24.