

Math 368, Class Assignments, R. Clark Robinson

Textbook: "Introduction to Mathematical Programming, 3rd Edition" by Russell Walker

Problems labeled **SP** are supplemental problems and are posted on Blackboard.
SP5:1 is the first supplemental problem for chapter 5.

Lecture	Section to be covered in lecture and assignments
1	1.1 – 1.5 Graphical Solution for Linear Programming
2	3.1 – 3.2 Slack Variables
3	3.3 Simplex Algorithm
4	3.6 General Constraints
5	4.1 – 4.2 Duality
6	4.1 – 4.2 Duality continued Homework 1: 1.4: 5, 7, 13; 3.3: 3, 11, 14, 15; 3.6: 4, 5, 6, 7
7	4.3 Sensitivity Analysis
8	3.4 Justification of Simplex Algorithm Homework 2: 4.2: 1, 3, 4, 5, 13; 4.3: 7(a-d);
9	3.4 Justification of Simplex Algorithm Homework: 3.4: 4, 6; SP3: 1, 2; 4.3: 6; SP4: 1; (Responsible for these problems, but don't turn in) Midterm Test 1: covers Linear Programming, chapters 1, 3, 4
10	6 Mathematical background, including open, closed, and compact sets
11	6 Definition of continuity & (matrix) derivative
12	6.2, 6.4, 6.6 Taylor's Theorem, First Order Conditions
13	6.6 Second Order Conditions & 7.1 Implicit Function Theorem Homework 3: SP6: 1, 2, 3, 4; 6.2: 6, 7;
14	7.1 Implicit Function Theorem & 7.2 – 7.3 Equality Constraints
15	7.4 Inequality Constraints
16	7.4 Inequality Constraints , continued Homework 4: 6.4: 3; SP6: 5, 6, 7; 6.6: 3, 4; SP7: 1, 2, 3
17	7.5 Convex Structures
18	7.5 Convex Structures continued
19	7.5 Convex Structures continued Homework 5: 7.4: 1; 7.5: 10; SP7: 5, 6, 7, 8, 10 Midterm Test 2: covers chapters 6 – 7
20	Correspondences , material not in Walker
21	Finite Horizon Dynamic Programming
22	Finite Horizon Dynamic Programming continued
23	Infinite Horizon Dynamic Programming
24	Infinite Horizon Dynamic Programming continued Homework 6: SP.PM: 1, 2, 3, 4; SP.FH: 1, 2
25	Infinite Horizon Dynamic Programming continued
26	Infinite Horizon Dynamic Programming continued Homework 7: SP.SD: 1, 2

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