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Note: Unless otherwise stated, it is always permissible to use the course software (Excel IORTutorial) for calculations. Also, Maple is acceptable for some tasks such as checking (or doing) your simplex calculations. As a general rule, you are expected to show your work. In particular, if you use software to solve a problem, you are expected to provide a transcript or some output and paste it into a document. Typed documents are preferred; hand written copy will be accepted if it is *neatly* written. Unless otherwise stated, hardcopy is the rule. It is expected that co-collaborators and other sources for the homework will be duly acknowledged. Problems that are to be worked by individuals without collaboration will be marked “(I)”. Each assignment will be worth about 45 points.

ASSIGNMENT 1

Points: 45

Due: February 5

Do the following exercises from Chapter 3: 3.1-4, 3.1-8, 3.2-5, 3.3-2, 3.4-14, 3.6-5(I). These can be found at the end of the chapter.

Do these exercises from Chapter 4: 4.1-5, 4.4-2, 4.4-8, 4.5-1.

Assignment Closed

ASSIGNMENT 2

Points: 50

Due: February 22

Do the following exercises from Chapter 4: 4.6-2, 4.6-5, 4.6.11, 4.6-16, 4.7-4(I)

Do the following exercises from Chapter 6: 6.1-3, 6.1-11(I), 6.3-1, 6.3-6, 6.8-4 (a)-(c), (e)-(f), (h), 6.8-5 (a)-(c), (f)(I).

Assignment Closed

ASSIGNMENT 3

Points: 45

Due: March 25

Do the following exercises from Chapter 10: 10.2-3(I), 10.3-2, 10.4-2(a)

Do the following exercises for Chapter 14:

N1. Prove that if a two-person zero-sum game has value ν , $m \times n$ payoff matrix A and optimal (mixed) strategy \mathbf{x} for player, and a constant c is added to every entry of A , then the new game has value $\nu + c$ and the optimal strategy \mathbf{x} is unchanged. (Hint: Use the LP formulation of the player 1 problem.)

N2. Consider a game with payoff table for player 1 as follows:

Strategy		Player 2			
		1	2	3	4
Player 1	1	4	2	-3	5
	2	-1	0	3	0
	3	2	3	-2	2
	4	-1	-1	2	2

- (a) Use the method of dominated strategies to eliminate as many plays as possible.
 (b) Apply the “least-worst” strategy and show how it does not solve the game.
 (c) Use Excel to solve the game for both players.
 (d) Use N1 to convert the payoff table to a fair game.

Do the following exercises for Chapter 15: 15.2-1, 15.2-6.

Assignment Closed

ASSIGNMENT 4

Points: 45

Due: April 15

Do the following exercises for Chapter 15: 15.5-7, N3 (Read the file Exercise15_5_6.pdf.)

Do the following exercises for Chapter 17: 17.2-2, 17.4-1, 17.5-9, 17.6-16.

Assignment Closed

ASSIGNMENT 5

Points: 45

Due: April 30

Do the following exercises for Chapter 17: 17.6.11, 17.10-1.

Do the following exercise for Chapter 18: 18.3-1.

Do the following exercises for Chapter 20: 20.1-3, 20.1-4(a),(b).

Assignment Closed