

CUR 412 - Game Theory and its Applications

Homework #1

- Due Date: 3/22. Late homeworks will get a 50% penalty.
- Everyone must individually write up their own answers.
- Please write your names in English.

Note: the numbers of the exercises **may be different** if you are using an electronic copy of the textbook!
Please check that the **name** of the exercise is the same.

Exercises from Chapter 2 in textbook:

- 16.1 (Working on a Joint Project)
- 27.1 (Variant of Prisoner's Dilemma with altruistic preferences)
- 31.2 (Hawk-Dove)
- 47.1 (Strict equilibria and dominated actions)
- 48.1 (Voting)

Exercises from Chapter 3 in textbook:

- 58.1 (Cournot's duopoly game with linear inverse demand and different unit costs)
 - Give an example of c_1, c_2 where both firms produce positive output in NE. Find the equilibrium levels of output.
 - Give an example of c_1, c_2 where one firm produces zero output in NE. Find the equilibrium levels of output.
- 61.1 (Cournot's game with many firms)
- 67.2 (Bertrand's duopoly game with discrete prices)