Game Theory, PhD in Economics and Management, 2005/06
Exercises, sheet no. 1, Monday, November 7, 2005

Esercise 1 Let $u : \mathbb{R} \to \mathbb{R}$ be a von Neumann - Morgenstern utility function. Find a couple of lotteries which are evaluated in an opposite way by u and by $v = u^3$

Esercise 2 Give an appropriate definition for a symmetric game (in strategic form, two players).

Discuss the properties of dominant (strong, strict, weak) and dominated strategies, iteratively undominated strategies and Nash equilibria.

Esercise 3 If we delete strongly dominated strategies, what happens to the Nash equilibria of a strategic game (with n players)? Same question for strict and weak dominance

Esercise 4 Consider the following game. There are n players. Each one has to name a number in $\{1, \dots, 100\}$. Whoever gets closest to the 2/3 of the mean of the number that were named, wins.

Add the details needed to have a game in strategic form and find its pure Nash equilibria (if any).

Esercise 5 Describe (draw? paint?) a game in extensive form, with at least one chance move and one non trivial information set. Describe its strategic form.