

## 1 Homework sheet 2 - Nash equilibrium in normal form games

1. Computing pure equilibria
2. Computing pure equilibria
3. Computing pure equilibria
4. Difficult Compute equilibria
5. Difficult Compute equilibria
6. In the notes the following theorem is given:

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Every normal form game with a finite number of pure strategies for each player, has at least one Nash equilibrium.

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Prove the theorem for 2 player games with  $|S_1| = |S_2| = 2$ . I.e. prove the above result in the special case of  $2 \times 2$  games.