CSE 5319/6319 Homework 2

Due March 19, 5:00 p.m. on Canvas

1. Modify KP p. 147, problem 7.4 for Rock-Paper-Scissors-Spock-Lizard as defined in the Wikipedia. -1 payoffs only occur (for both players) when they choose the same weapon. Use GLPSOL to compute correlated and coarse correlated equilibria. Both players should have expected payoffs of 0.5. (15 points)

2. Compute Nash and correlated equilibria for KP p. 147, problem 7.2 using Gambit and GLPSOL. (15 points)

3. Like Roughgarden's hierarchy of equilibria example (p. 178), compute the expected cost per agent in a mixed Nash equilibrium when there are five agents with seven edges. (15 points)

4. Determine the PNE and OPT status for the eight possible agent choice situations for the following instance of the location game (55 points):

Agent 1 chooses

Agent 2 chooses

Agent 3 chooses