Economics 104: Game Theory, Spring 2011
Problem Set 7

(0) Take *any* Nash equilibrium α^* of a zero sum game. Show that:
$\max_{\alpha_1 \in \Delta A_1} \min_{\alpha_2 \in \Delta A_2} U_1(\alpha_1, \alpha_2) = \min_{\alpha_2 \in \Delta A_2} \max_{\alpha_1 \in \Delta A_1} U_1(\alpha_1, \alpha_2) = U_1(\alpha^*)$

(O) Questions:

(1) Exercise 433.1 (Feasible payoff pairs in a *Prisoner's Dilemma*)

(2) Exercise 442.1 (Deviations from grim trigger strategy)

(3) Exercise 443.1 (Delayed motified grim trigger strategies)

(4) Exercise 443.2 (Different punishment lengths in subgame perfect equilibrium)

(5) Exercise 445.1 (*Tit-for-tat* as a subgame perfect equilibirum)

(6) Exercise 452.3 (Minmax payoffs)

(7) Exercise 454.2 (Nash equilibrium payoffs in infinitely repeated games)

(8) Exercise 454.3 (Repeated Bertrand duopoly)

(9) Exercise 459.1 (Costly price changing)

(10) Exercise 459.2 (Detection lags)

(11) Exercise 459.3 (Alternating moves)

(OR) Questions:

(12) Exercise 139.1

(13) Exercise 143.1 (note that "machine" is another term for automata)

(14) Exercise 146.1