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14.123 Microeconomic Theory III
Spring 2009

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The Last Problem Set

14.123 Spring 2009, Peter Eso

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Good news: This set is a singleton!

Q1. Suppose that the stage game

	L	R
U	2,3	1,5
D	0,1	0,1

is repeated infinitely many times, and that players maximize the discounted sum of payoffs with discount factor $\delta = 1/2$.

(a) Show that the outcome “(U,L) forever” can be sustained in a Nash equilibrium of the repeated game.

(b) Show that the outcome “(U,L) forever” cannot occur along the equilibrium path of a subgame perfect equilibrium of the repeated game.

(Hint: Recall how to decompose the average discounted payoff into today’s payoff and the continuation payoff, and note that the worst continuation payoff for a player in a SPE may be strictly greater than his minmax payoff, depending on the concrete payoff-structure of the game.)