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تمرین‌های سری ۱

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اقتصاد خرد ۲
دکتر محمدحسین دهقانی

Chapter 8: MWG Exercises 8.B.3

Additional Exercise 1: The game matrix below gives Player 1's payoffs:

		Player 2	
		L	*R*
Player 1	*T*	*x*	0
	B	0	*y*

where $x > y > 0$. Let p be the probability with which Player 1 believes that Player 2 will play L. Derive the best response correspondence $BR(p)$.

Additional Exercise 2: The game matrix below gives Player 1's payoffs:

		Player 2	
		S	*D*
Player 1	*U*	15	90
	M	*B*	75
	D	55	40

Let q be the probability with which Player 1 believes that Player 2 will play S.

* a) Suppose that $B = 35$. Find the three ranges of values of q for which U, M, and D are optimal, respectively (and draw a picture, expected utility versus q). Is any action strictly dominated, and if so, by what mixed action? (Draw another picture, utility when Player 2 plays S versus utility when Player 2 plays D.)
* b) Repeat a), assuming now that $B = 20$.
* c) For what range of values of B is action M strictly dominated?

Additional Exercise 3: Solve the following game by iteratively deleting strictly dominated strategies:

		Player 2			
		a	*b*	*c*	*d*
Player 1	*A*	3, 1	0, 0	1, 0	0, 0
	B	1, 1	1, 0	1, 1	1, 2
	C	1, 2	0, 4	6, 2	1, 1
	D	0, 4	1, 0	1, 1	2, 3

Additional Exercise 4:

If you delete strictly dominated strategies order is not important but if you delete weakly dominated ones order matters to what remains at the end.

Consider the following game:

		Player 2		
		L	*C*	*R*
Player 1	*T*	50, 0	5, 5	1, -1000
	B	50, 50	5, 0	0, -1000

Show that the set of strategies that survive the iterated deletion of *weakly* dominated strategies depends on the order of deletion.