

Assesed Solution Review

Find the set of rationalizable strategies for the following game.

		2			
1		a	b	c	d
	w	5, 4	4, 4	4, 5	12, 2
	x	3, 7	8, 7	5, 8	10, 6
	y	2, 10	7, 6	4, 6	9, 5
	z	4, 4	5, 9	4, 10	10, 9

Note that each player has more than one dominated strategy. Discuss why, in the iterative process of deleting dominated strategies, the order in which dominated strategies are deleted does not matter.

$$R^0 = \{w, x, y\} \times \{a, b, c\}$$

$$R^1 = \{w, x\} \times \{c\}$$

$$R^2 = \{x\} \times \{c\}$$

$$\text{Final Strategy} = \{x\} \times \{c\}$$

The order doesn't matter because a round isn't over until both players have moved.

x dom y
 $\frac{2}{3}w + \frac{1}{3}x$ dom z
 c dom d
 $\frac{9}{10}c + \frac{1}{10}a$ dom b

$$R^1 = \{w, x\} \times \{a, c\}$$

c dom a

$$R^2 = \{w, x\} \times \{c\}$$

x dom w so $S = (x, c)$

In any iteration, each player considers all strategies not eliminated in the last iteration. Then, in the next iteration all strategies eliminated for either player are eliminated. Since all are eliminated between iterations, "order" has little meaning within any given round.