

IDSDS. *The Iterated Deletion of Strictly Dominated Strategies*

		Player 2					
		<i>D</i>		<i>E</i>		<i>F</i>	
Player 1	<i>A</i>	8	6	0	9	3	8
	<i>B</i>	3	2	2	1	4	3
	<i>C</i>	2	8	1	5	3	1

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	<i>B</i>	3	2	2	1	4	3
	<i>C</i>	2	8	1	5	3	1

IDWDS. *The Iterated Deletion of Weakly Dominated Strategies*

		Player 2			
		L		R	
Player 1 1	A	4	0	0	0
	T	3	2	2	2
	M	1	1	0	0
	B	0	0	1	1

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		Player 2			
		L		R	
Player 1 1	A	4	0	0	0
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		L		R	
Player 1 1	A	4	0	0	0
	T	3	2	2	2
	M	1	1	0	0
	B	0	0	1	1

Nash equilibrium

		Player 2		
		D	E	F
Player 1	A	1 0	2 3	3 1
	B	3 3	1 5	4 4
	C	3 2	0 1	3 0

		Player 2		
		C	D	
Player 1	A	2 2 2	4	3 6
	B	5 3 2	3	4 2

Player 3 chooses F

		Player 2		
		C	D	
Player 1	T	0 0 0	1	2 5
	B	3 6 1	0	0 1

Player 3 chooses G

Nash equilibrium

		Player 2		
		<i>D</i>	<i>E</i>	<i>F</i>
Player 1	<i>A</i>	1 0	2 3	3 1
	<i>B</i>	3 3	1 5	4 4
	<i>C</i>	3 2	0 1	3 0

		Player 2		
		<i>C</i>	<i>D</i>	
Player 1	<i>A</i>	2 2 2	4 3 6	
	<i>B</i>	5 3 2	3 4 2	

Player 3 chooses F

		Player 2		
		<i>C</i>	<i>D</i>	
Player 1	<i>T</i>	0 0 0	1 2 5	
	<i>B</i>	3 6 1	0 0 1	

Player 3 chooses G

Large game.

150 students in a class, they simultaneously ask for a grade (A, B or C); if 20% or less (i.e. ≤ 30) ask for an A then all requests are granted, otherwise they all get a C.

Example with uncertain outcomes. A simple auction. There are two players, Charlie and Doreen. There is an object (e.g. a painting) which Charlie values at \$120 and Doreen values at \$180. Each player has to submit a bid of either \$50 or \$80. The highest bidder gets the object and pays his/her bid (the loser does not pay anything). If the bids are equal, a fair coin is tossed.

- Outcomes:
- a* Charlie wins and pays \$50
 - b* Charlie wins and pays \$80
 - c* Doreen wins and pays \$50
 - d* Doreen wins and pays \$80

Player's utility = value – price paid (if wins, otherwise 0)

		Doreen (value: \$180)	
		bid \$50	bid \$80
Charlie (value: \$120)	bid \$50		
	bid \$80		

- Outcomes: *a* Charlie wins and pays \$50
b Charlie wins and pays \$80
c Doreen wins and pays \$50
d Doreen wins and pays \$80

Player's utility = value – price paid (if wins, otherwise 0)

		Doreen (value: \$180)	
		bid \$50	bid \$80
Charlie (value: \$120)	bid \$50	$\begin{pmatrix} b & d \\ \frac{1}{2} & \frac{1}{2} \end{pmatrix}$	d
	bid \$80	b	$\begin{pmatrix} b & d \\ \frac{1}{2} & \frac{1}{2} \end{pmatrix}$

Doreen

bid \$50

bid \$80

Charlie

bid \$50

bid \$80

35 , 65	0 , 100
40 , 0	20 , 50