

IESDS

Dominated Strategies

	A	B	C
A	5, 1	2, 2	1, 3
B	2, 3	5, 4	6, 0
C	3, 2	3, 0	0, 4

If there are not pure strategies that dominate other pure strategies, we can consider mixed strategies that dominate pure strategies as it follows.

Dominated Strategies

	A	B	C
$\frac{1}{2}A$	5, 1	2, 2	1, 3
$\frac{1}{2}B$	2, 3	5, 4	6, 0
C	3, 2	3, 0	0, 4

We start from player1, if we consider (A,B) as a mixed strategy, with probabilities $p=1/2$ for A and $1-p$ for B, we can observe the payoff of mixed (A,B) is always greater than the payoff of C so we can eliminate C.

For player1 (A,B) strictly dominates C.

Dominated Strategies

	A	B	C
$\frac{1}{2}A$	5, 1	2, 2	1, 3
$\frac{1}{2}B$	2, 3	5, 4	6, 0
C	3, 2	3, 0	0, 4

Now for player1 we have A and B, we cannot have a mixed strategy with only two strategies left so for player1 IESDS stops.

Now I pass to player2. **Note that for player2 I have to take into account C.**

Dominated Strategies

	A	B	C
$\frac{1}{2}A$	5, 1	2, 2	1, 3
$\frac{1}{2}B$	2, 3	5, 4	6, 0
C	3, 2	3, 0	0, 4

For player2 B dominates A so I can eliminate A.

Dominated Strategies

	A	B	C
$\frac{1}{2}$ A	5, 1	2, 2	1, 3
$\frac{1}{2}$ B	2, 3	5, 4	6, 0
C	3, 2	3, 1	0, 6

For player1 now B strictly dominates A so I can eliminate A.

Dominated Strategies

	A	B	C
$\frac{1}{2}$ A	5, 1	2, 2	1, 3
$\frac{1}{2}$ B	2, 3	5, 4	6, 0
C	3, 2	3, 1	0, 6

For player2 B strictly dominates C so I can eliminate C.