

CS3191

Test your understanding!

Test 3: Mixed Strategies

Question 1 Which of the following are valid mixed strategies for a player who has four pure strategies?

- $(1/2, 1/4, 1/8, 1/4)$
- $(1, 0, 0, 0)$
- $(1/8, 1/2, 1/8, 1/4)$
- $(1/2, 1/8, 1/8, 1/8)$

Question 2 What is the pay-off for Player 1 of playing strategy $(1/2, 1/2)$ against $(1/3, 2/3)$ in the following game?

- 0
- $-1/6$
- $1/6$
- $1/3$

$$\begin{vmatrix} -1 & 2 \\ 1 & -2 \end{vmatrix}$$

Question 3 Which of the following are optimal strategies for Player 2 in the following game?

- 1
- $(1/3, 0, 2/3, 0)$
- $(1/3, 1/3, 1/3, 0)$
- 3

$$\begin{vmatrix} -1 & 2 & -1 & 1 \\ -2 & 2 & -2 & -1 \\ -1 & -2 & -1 & 2 \\ -1 & 2 & -1 & -2 \end{vmatrix}$$

Question 4 What is the most precise statement you can make about equilibrium points in the following game without trying to calculate any?

- There exists at least one equilibrium point.
- There exists precisely one equilibrium point.
- Nothing.
- There is no equilibrium point.

$$\begin{vmatrix} 1 & 4 \\ 5 & -2 \end{vmatrix}$$