

Quiz 4

Consider the two-player game in which each of the two players states a number in the set $\{1, \dots, M\}$. If the two players state the same number, then player 1 pays 1 dollar to player 2 ; otherwise player 2 pays 1 dollar to player 1.

1. For $M = 2$, construct the payoff matrix and find the Nash equilibria of the game (where payoffs are equal to dollars).
2. Find the Nash equilibria for an arbitrary integer M . Justify your answer.