An application in game theory – Part II

Combinatorial Optimization – Group K

Class 20

Spring 2023

1. The payoff matrix of a two-player, zero sum game is shown below. Show (without using a computer) that $x = (\frac{7}{8}, 0, \frac{1}{8})^\top$ and $y = (\frac{1}{4}, \frac{3}{4}, 0)$ are optimum mixed strategies for the Column Player and the Row Player, respectively. ($\pi = 3.14159\ldots$)

$$\begin{pmatrix} 3 & 7 & 27 \\ 7 & 5 & -1 \\ 6 & \pi & 8 \end{pmatrix}$$