Assignment 2: Algorithmic Game Theory

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Deadline: September 18 2021, 11:59 PM

1. Let $\mathcal{A}$ be a $n \times n$ matrix of a matrix game. Prove that, if $\mathcal{A}$ is anti-symmetric, then the value of the row player in mixed strategies is 0.

   [5 Marks]

2. Let $\mathcal{A}$ be a $n \times n$ matrix of a matrix game. Assume $\mathcal{A}$ is a latin square; that is, each row and each column of $\mathcal{A}$ is a permutation of $\{1, 2, \ldots, n\}$. Compute an MSNE of the corresponding matrix game.

   [5 Marks]