SOME MATRIX TECHNIQUES IN GAME THEORY

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Abstract. A short proof is given to the known result that equilibrium pairs of a two-person general-sum game can be found by solving certain systems of linear inequalities. The technique is then extended to study equilibrium pairs of evolutionary games and auction games. In the former case, evolutionary stable strategies are also determined. Furthermore, it is shown that the computation procedures can be implemented in standard linear programming packages such as LINDO or Maple, and used as education or research tools to handle examples of moderate sizes.

Key words and phrases: bimatrix game, payoff matrices, equilibrium pairs.

REFERENCES