

1024-37-197

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Misiurewicz. *Dynamics of the Nash Map.*

In one of the proofs that a Nash equilibrium always exists for a noncooperative game J. Nash defined a *better response map*. It is a continuous map from a simplex of strategies to itself. He then used the Brouwer fixed point theorem to prove the existence of a fixed point for the map and observed that a point is fixed by the map if and only if it is a Nash equilibrium. We examine the dynamics of the Nash map for two person - two strategy games and show that the dynamics must be one of three types. One class contains the Prisoner's Dilemma game, one class contains the Matching Pennies game and one class contains the game of Chicken. The classes will be explained and illustrated by examples. (Received January 08, 2007)