

1031-03-60

Paul B Larson* (larsonpb@uohio.edu), Department of Mathematics and Statistics, Miami University, Oxford, OH 45056, and **Saharon Shelah**. *The stationary set splitting game.*

The *stationary set splitting game* is a game of perfect information of length ω_1 between two players, Unsplit and Split, in which Unsplit chooses stationarily many countable ordinals and Split tries to continuously divide them into two stationary pieces. We show that it is possible in ZFC to force a winning strategy for either player, or for neither. This gives a new counterexample to Σ_2^2 maximality with a predicate for the nonstationary ideal on ω_1 , and an example of a consistently undetermined game of length ω_1 with payoff definable in the second-order monadic logic of order. We also show that the determinacy of the game is consistent with Martin's Axiom but not Martin's Maximum. (Received August 01, 2007)