

Meeting: 1003, Atlanta, Georgia, SS 26A, AMS-SIAM Special Session on Dynamic Equations on Time Scales; Integer Sequences and Rational Maps, I

1003-12-847 **Neil J. Calkin*** (calkin@ces.clemson.edu), Department of Mathematical Sciences, Clemson University, Clemson, SC 29634-0975, and **John G. Stevens** and **Diana M. Thomas**. *Maximal Periods of the odd n-Number Ducci Game.*

Ducci n-Number Games have been studied over the last century by a variety of reseachers. This article considers the Ducci Game as a map over the finite field \mathbb{Z}_2 . The period lengths are characterized through orders of minimal annihilating polynomials. The minimal polynomial of the map can be explicitly written down for any n . Using the minimal polynomial we obtain a formula for the maximal period in the case of odd n . (Received September 30, 2004)