1056-91-2094   **Reginald Ford*** (`fordrk@jmu.edu`), Dept. of Mathematics and Statistics, MSC 1911, James Madison University, Harrisonburg, 22807, and **M. Vergara**, **J. C. Ortega**, **D. Melendez** and **Z. Pena**. *Mathematics Models of Mancala.*

From May 11th to June 19th five students participated in the NREUP funded Mentoring for Minorities in Mathematics (M^3) six week summer research program at James Madison University. The ancient board game of Mancala, popular in Africa and Asia, motivated questions in which we drew from combinatorics, strategy analysis, programming, search algorithms and basic game theory.

This talk tracks our progress over the summer, as we moved from the single player games, Tchukaillion and Tchuka Ruma, to the two player games of Ayo and Mancala, in the hopes of finding an optimal strategy. (Received September 23, 2009)