1077-H1-2665   **Brant Jones*** (`jones3bc@jmu.edu`), **Laura Taalman** and **Anthony Tongen**. *Solitaire mancala games as pencil puzzles.* Preliminary report.

Mancala games are played by sowing stones among pits on a game board. Because all of the stones in a given pit must be removed and then sown on each turn, the analysis of game play leads naturally to the study of number theoretic properties of the game board.

As a player, one of the strategic goals in the game is to set up a single chain of moves that allows the capture of all available stones. In this talk, we consider the question of when it is possible to construct such a "slam" board given only partial information about the number of stones on the board. (Received September 22, 2011)