

1086-VJ-738

Rosanna Mersereau and **Michael B. Ward*** (wardm@wou.edu), Mathematics Department, Western Oregon University, Monmouth, OR 97361. *Magic Cayley-Sudoku Tables*. Preliminary report.

A Cayley-Sudoku Table (C-S Table) is the Cayley table of a finite group arranged (unconventionally) so that the body of the Cayley table is divided into blocks containing each group element exactly once, as in a sudoku puzzle. The second author and his students introduced C-S Tables in *Mathematics Magazine* **83** (2010) pp. 130-139. In this talk we introduce Magic C-S Tables in which each block of the C-S Table is a magic square. That is, the (group) sum of the entries in each row, column, and diagonal of each block equals the same fixed group element. Examples, theorems, and open questions suitable for undergraduate investigation are included. (Received September 11, 2012)