Leonard Euler, 1707-1783, one of the greatest and most prolific of all mathematicians was very often used by Martin Gardner in his *Scientific American* column.

Euler invented the so-called semi magic squares where different symbols occurred in every row and column of the square. The diagonals could not conform.

Here is a 4x4 example where the symbols are number, shape and color.

Prob 1: Arrange the 16 pieces into a semi magic square.

Prob. 2: If two players alternately place a piece of their choice on a 4x4 grid, who can win this game? A piece can be played only if its 3 symbols do not match any other symbol in its row or column.

If the pieces start in a face-up kitty, it may be that 2nd can always win. IF the pieces start face down, either player could win.