

# Signed Magic arrays with extra properties

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A signed magic array,  $SMA(m, n; s, t)$ , is an  $m \times n$  array with the same number of filled cells  $s$  in each row and the same number of filled cells  $t$  in each column, filled with a certain set of numbers that is symmetric about the number zero, such that every row and column has a zero sum. We use the notation  $SMA(m, n)$  if  $m = t$  and  $n = s$ . In this presentation we study the existence of an  $SMA(m, n)$  such that the entries  $x$  and  $-x$  do not appear in the same row and the same column.