Magic square   P45484_en

A *magic square* of order n is an arrangement of the integer numbers 1 to n^2 in a $n \times n$ square where the sum of the numbers of each row, of each column, and that of the two main diagonals are the same. The following figure shows two instances of magic squares of order 3 and 6:

```
                    28   4    3   31   35   10
      4   9   2     36  18   21   24   11    1
      3   5   7      7  23   12   17   22   30
      8   1   6      8  13   26   19   16   29
                     5  20   15   14   25   32
                    27  33   34    6    2    9
```

Magic squares have been often used as talismans, to help in the childbirths, to prevent bites of insects or to cure illnesses. Many magic squares have been found engraved in plates, glasses, medallions or monuments. For instance, you can find another magic square in the west façade of the Sagrada Família of Gaudí.

Write a function

> **bool** *magic_square*(**const** *vector* $<$ *vector* $<$**int**$>$ $>$& *t*);

that, given a table t of $n \times n$ integer numbers, prints whether it represents a magic square or not.

Precondition

The table t is square.

Problem information

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