BlueBook - Magic Square

Time limit: 1.0s **Memory limit:** 16M

BlueBook

Determine if a table of numbers containing N rows and N columns is a magic square.

An $N \times N$ table of numbers $(1 \leq N \leq 50)$ is a magic square if and only the sum of the numbers along any row or column is constant. The diagonals are *not* required to have the same sum.

Input Specification

The first line of input contains an integer T $(1 \leq T \leq 10)$, the number of test cases to follow.
Each test case starts with an integer N $(1 \leq N \leq 50)$, which is followed by N^2 integers, each on its own line - the entries of the table, in reading order. This means that the first N integers represent the first row of the table, from left to right, the next N integers the second row likewise, and so on. There is a blank line between each pair of adjacent cases.

Output Specification

For each test case, print `yes` if it is a magic square, and `no` if it is not.

Sample Input

```
3
2
1
2
2
1

1
5

2
1
2
3
4
```

Sample Output

```
yes
yes
no
```