

Problem

Given a square matrix, calculate the absolute difference between the sums of its diagonals. For example, the square matrix is shown below:

1	2	3
4	5	6
9	8	9

The left-to-right diagonal = $1 + 5 + 9 = 15$. The right to left diagonal = $3 + 5 + 9 = 17$. Their absolute difference is $|15 - 17| = 2$.

Assignment

Create a program that solves the problem above. You can choose the programming language and framework you like. There are no constraints on the user interface.

Input

A single integer n , representing the number of rows and columns in the matrix .

n enumerations of n integers. Each enumeration describes a row. These integers must be between -100 and 100.

Output

The absolute difference between the sums of the matrix's two diagonals as a single integer.

Sample Input

```
11 2 4
4 5 6
10 8 -12
```

Sample Output

```
15
```