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## Control C401A                                                    P64789_en

Your task is to write a program that reads a sequence of square matrices of integers, and for each one prints the sum of the numbers which are in their two diagonals.

Usign the definition

   **typedef** *vector*<*vector*<**int**> > *Matrix*;

your program must implement and use the function

   **int** *sum_diagonals*(**const** *Matrix*& *mat*);

that returns the sum of the numbers in the diagonals of the square matrix and non empty |mat|.

### Input

The input consists of a sequence of cases. Each case starts with the size $n \geq 1$ of the matrix, followed by $n$ lines, each one with the $n$ integers of the corresponding row.

### Output

For each matrix, print a line with the sum of the numbers which are in its diagonals.

### Sample input 1

```
1
7

2
1 2
3 4

3
  1    3    0
  5    2    7
 -8   -4   -9

4
1000000          3          4   -1000000
      1   -1000000    1000000          7
      2   -1000000    1000000          8
1000000          5          6   -1000000
```

### Sample output 1

```
7
10
-14
0
```

### Sample input 2

```
5
11 22 33 46 15
41 33 94 58 71
56 23 45 98 21
54 15 37 26 17
65 88 99 66 11
```

### Sample output 2

```
279
```

## Problem information

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