

Project Euler #18: Maximum path sum I



This problem is a programming version of [Problem 18](#) from [projecteuler.net](#)

By starting at the top of the triangle below and moving to adjacent numbers on the row below, the maximum total from top to bottom is **23**. The path is denoted by numbers in bold.

```
  3
 7 4
2 4 6
8 5 9 3
```

That is, $3 + 7 + 4 + 9 = 23$.

Find the maximum total from top to bottom of the triangle given in input.

Input Format

First line contains T , the number of testcases. For each testcase:

First line contains N , the number of rows in the triangle.

For next N lines, i 'th line contains i numbers.

Constraints

- $1 \leq T \leq 10$
- $1 \leq N \leq 15$
- $numbers \in [0, 100)$

Output Format

For each testcase, print the required answer in a newline.

Sample Input

```
1
4
3
7 4
2 4 6
8 5 9 3
```

Sample Output

```
23
```

Explanation

As shown in statement.