

# Project Euler #18: Maximum path sum I

## Problem Statement

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

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.

## Output

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

## Constraints

$$1 \leq T \leq 10$$

$$1 \leq N \leq 15$$

$$numbers \in [0, 100)$$

## Sample input

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

## Sample output

```
23
```