IOI '94 P1 - The Triangle

Time limit: 0.6s   **Memory limit:** 16M

```
        7
      3   8
    8   1   0
  2   7   4   4
4   5   2   6   5      (Figure 1)
```

Figure 1 shows a number triangle.

Write a program that calculates the highest sum of numbers passed on a route that starts at the top and ends somewhere on the base.

- Each step can go either diagonally down to the left or diagonally down to the right.
- The number of rows in the triangle is > 1 but ≤ 100.
- The numbers in the triangle, all integers, are between 0 and 99.

Input Specification

The first line of input will contain an integer N. The ith of the next N lines will contain i space-separated integers, denoting the values of the triangle.

Output Specification

The highest sum as required by the problem statement.

Sample Input

```
5
7
3 8
8 1 0
2 7 4 4
4 5 2 6 5
```

Sample Output

```
30
```