Number Triangles

Consider the number triangle shown below. Write a program that calculates the highest sum of numbers that can be 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.

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

In the sample above, the route from 7 to 3 to 8 to 7 to 5 produces the highest sum: 30.

PROGRAM NAME: numtri

INPUT FORMAT

The first line contains R (1 <= R <= 1000), the number of rows. Each subsequent line contains the integers for that particular row of the triangle. All the supplied integers are non-negative and no larger than 100.

SAMPLE INPUT (file numtri.in)

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

OUTPUT FORMAT

A single line containing the largest sum using the traversal specified.

SAMPLE OUTPUT (file numtri.out)

```
30
```

Submit a solution:

Choose File | No file chosen | Send it in!

Training Gateway | Comment or Question