TRIANGLE

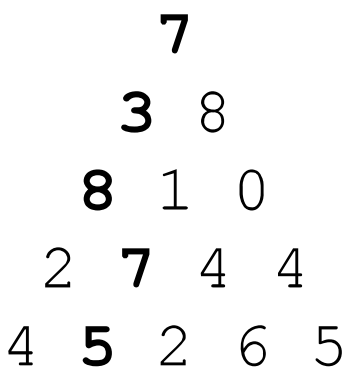

Fig. 1

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 <= 1000.

* The number in the triangle, all integers are between 0 and 99 inclusive.

In the example above the route through 7,3,8,7,5 produces the highest sum 30.

INPUT DATA

Data about the number of rows in the triangle are first read input followed by the rows of the triangle.

In our example, input appears as follows:

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

OUTPUT DATA

The highest sum is written as an integer.
In our example this file would contain the number 30.