

Thief of deVillage!!!

In a reputed company our team has been working on a game project named 'Thief of deVillage!!!'. Sounds thrilling huh! ;-). The game is very simple. You just have to roam around the treasure pyramids of deVillage and steal the treasures buried there for centuries!!

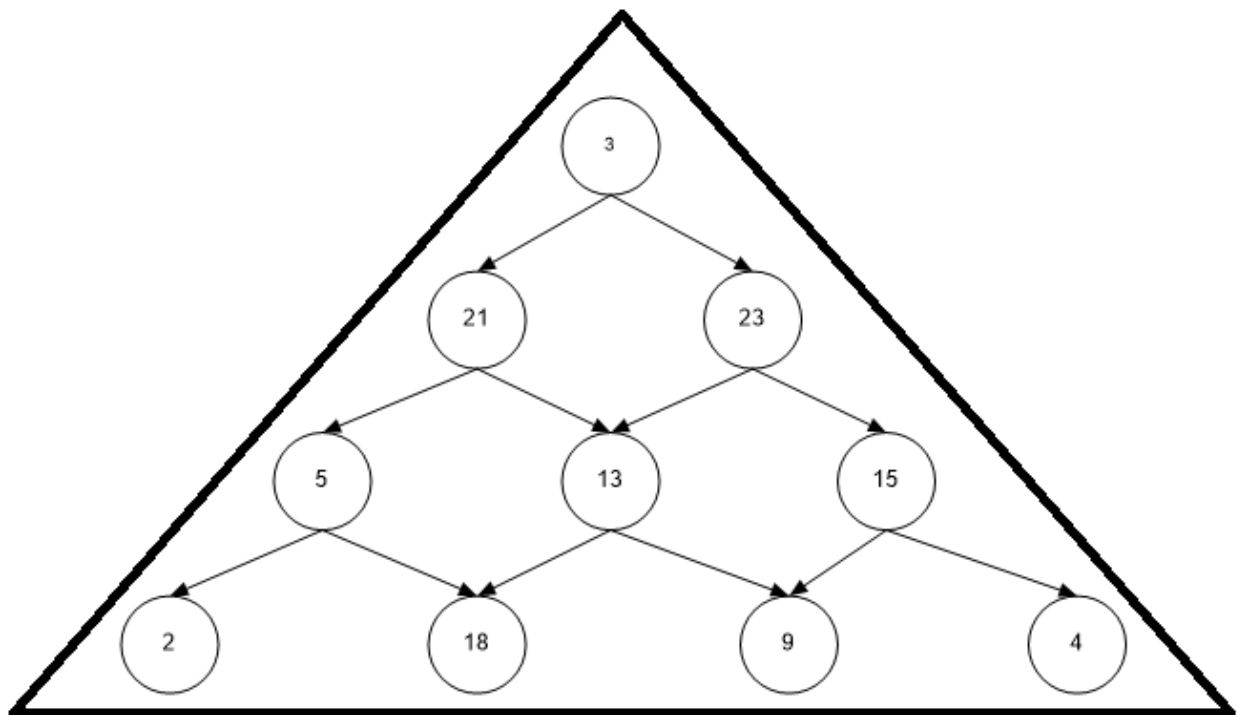


Fig: A pyramid of deVillage

As you can see in the figure above that this pyramid of deVillage contains four floors with some cells inside them. The number of cells in a floor = the number of cells in its upper floor + 1. All the cells are full of plenty of gold coins, **C**.

Your goal in this game is to grab the maximum possible coins **m** from these mysterious pyramids. As these pyramids are very *special* so your journey through them will also be very *special*. You have to begin your journey from the top cell of the top floor of a pyramid and finish it at any of the bottom cells of the bottom floor.

Game Instructions: There are only two buttons in this game - the left move button and the right move button. From any position (cell), pressing the left move button will move you to your lower left cell and pressing the right move button will move you to your lower right cell. Remember that you can never go back to the upper floors while moving. You can only choose between going left or right lower cells. As you move from cell to cell the coins at each cell will be deposited to your account. You have to obtain the maximum possible balance from each pyramid to achieve 3 stars (***) on each stage of the game.

Now you need to calculate the maximum possible balance **m** for a stage.

Input Specification:

Each test case starts with a single integer **N** ($1 \leq N \leq 100$) which represents the number of floors in a pyramid.

Then there will be **N** Lines denoting the floor of the pyramid from top to bottom. Each line will contain some integer values separating by spaces representing the number of coins, **C** ($1 \leq c \leq 100$) in each cell of the respective floor.

Two successive cases are separated by a single new line.

Output Specification:

For each test case, print "Output: m" (without quotation) where **m** denotes the maximum possible account balance one can make in a stage.

Sample Input:

```
4
3
21 23
05 13 15
02 18 09 04

5
92
31 72
85 31 21
25 90 22 08
30 50 54 86 88
```

Sample Output:

```
Output: 57
Output: 352
```

Explanation of First Test Case:

Please look at the given figure in this problem.

$$3 + 23 + 13 + 18 = 57$$