Code : TRI | Problem 2 | Score : 100

Triangled

Problem :

Given an equilateral triangle with side length N divided into a triangular grid of triangles with side length 1, count the total number of triangles present in the grid.

For example, if N is 4:

Here there are ten right side-up and six upside down triangles with a side length of 1, six right side-up and one upside down triangles with a side length of 2, three right-side-up triangles with a side length of 3, and one right side-up triangle with a side length of 4. The total number of triangles is 27.

Input :

The first line of the input contains an integer T denoting the number of test cases. The description of T test cases follows. Each test case contains the side length of the triangle.

Output :

The output returns the total number of triangles contained in the large triangle.

Sample :

Input :

1 //Number Of Test Cases

4

Output :

27

Explanation :

There are 27 triangles contained in the figure.

Scoring :

There will be 5 test cases, each valued 20 points.