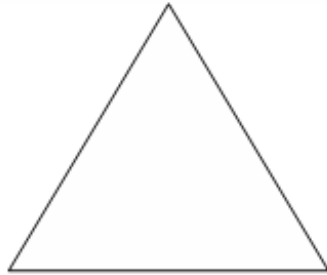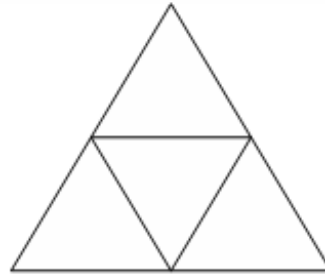# Counting Triangles III
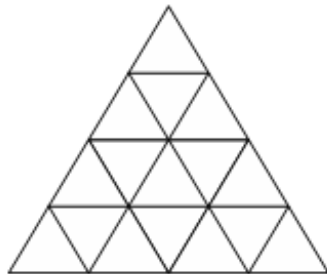
Have you felt bored when counting triangles?

Like TRICOUNT and TCOUNT2, we define the LEVEL of a triangle as in the following illustrative image:
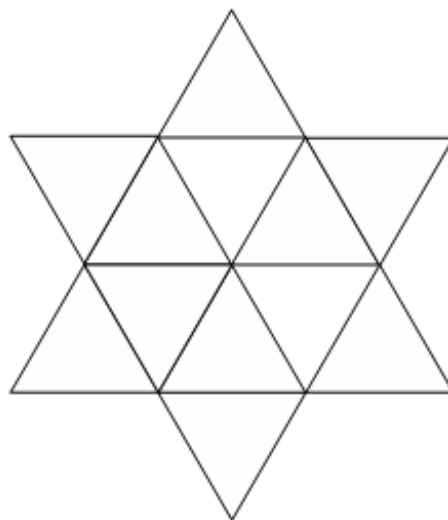

LEVEL 1

LEVEL 2

LEVEL 4

And now we will continue defining the LEVEL of a hexagram. It's called level N hexagram if it's joined by 12 triangles, each one is a level N triangle.

Each triangle has level N

Task: All you have to do is to count all triangles in the level N hexagram.

Input

The first line of the input contains an integer T - the number of test cases and T lines follow. Each line contains an integer N which is the level of the hexagram in that test case.

Output

For each test case, you should write a seperate line: the number of triangles in the level N hexagram. (All answers will fit within the range of a 64-bit positive integer)

Example

Input:
1
1

Output:
20

The author allows only few languages