Project Euler #94: Almost equilateral triangles



Problem Statement

This problem is a programming version of Problem 94 from projecteuler.net

It is easily proved that no equilateral triangle exists with integral length sides and integral area. However, the almost equilateral triangle 5-5-6 has an area of 12 square units.

We shall define an *almost equilateral triangle* to be a triangle for which two sides are equal and the third differs by no more than one unit.

Find the sum of the perimeters of all *almost equilateral triangles* with integral side lengths and area and whose perimeters do not exceed N.

Input Format

First line contains T, denoting the number of testcases. Next T lines contains N.

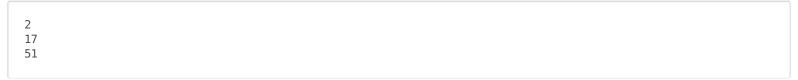
Constraints

$$2 \le T \le 10^5$$
$$15 < N < 10^{18}$$

Output Format

Output T lines corresponding to T test cases.

Sample Input



Sample Output

16 66

Explanation

For first test case we get perimeter 16 - (5 - 5 - 6).

Second test case there is another triangle 16-17-17 whose area is 120 units.