Project Euler #75: Singular integer right trangles

This problem is a programming version of Problem 75 from projecteuler.net

It turns out that $12 cm$ is the smallest length of wire that can be bent to form an integer sided right angle triangle in exactly one way, but there are many more examples.

$$\begin{align*}12 cm &: (3,4,5) \\ 24 cm &: (6,8,10) \\ 30 cm &: (5,12,13) \\ 36 cm &: (9,12,15) \\ 40 cm &: (8,15,17) \\ 48 cm &: (12,16,20) \end{align*}$$

In contrast, some lengths of wire, like $20 cm$, cannot be bent to form an integer sided right angle triangle, and other lengths allow more than one solution to be found; for example, using $120 cm$ it is possible to form exactly three different integer sided right angle triangles.

$$120 cm : (30,40,50), (20,48,52), (24,45,51)$$

Given that L is the length of the wire, for how many values of $L \le N$ can exactly one integer sided right angle triangle be formed?

Input Format

First line contains T that denotes the number of test cases. This is followed by T lines, each containing an integer, N.

Constraints

$1 \le T \le 10^5$
$12 \le N \le 5 \times 10^6$

Output Format

Print the required answer for each test case.

Sample Input

```
2
12
50
```

Sample Output

```
1
6
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