

Project Euler #75: Singular integer right triangles

This problem is a programming version of [Problem 75](#) from [projecteuler.net](#)

It turns out that **12cm** 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.

12cm : (3, 4, 5)
 24cm : (6, 8, 10)
 30cm : (5, 12, 13)
 36cm : (9, 12, 15)
 40cm : (8, 15, 17)
 48cm : (12, 16, 20)

In contrast, some lengths of wire, like **20cm**, 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 **120cm** it is possible to form exactly three different integer sided right angle triangles.

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

Given that L is the length of the wire, for how many values of $L \leq N$ 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

$$1 \leq T \leq 10^5$$

$$12 \leq N \leq 5 \times 10^6$$

Output Format

Print the required answer for each test case.

Sample Input

```
2
12
50
```

Sample Output

```
1
```

