

# 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
6
```