

## Problem E. Pythagorean triple

Source file name: E.c, E.cpp, E.java  
Input: Standard  
Output: Standard  
Author(s):

Andrew has been interested since he was a kid on some number theory topics. He has always looked for numbers with interesting properties, his friends may call them “weird”. He is now a college student and is very interested in his programming class since he can apply his math skills in the programming field.

He is studying what is called Pythagorean triples, a Pythagorean triple consists of three positive integers  $a$ ,  $b$ , and  $c$ , such that  $a^2 + b^2 = c^2$ . Such a triple is commonly written  $(a, b, c)$ , and a well-known example is  $(3, 4, 5)$ .

Your task is given a number  $N$  to find all Pythagorean triples that exist where  $a \leq b \leq c \leq N$ .

### Input

The input consists of several test cases, each test case contains a unique line with a single number  $N$ . The input ends with a test case where  $N = 0$ , this test should not be processed.

- $1 \leq N \leq 512$

### Output

For each test case you must print a line with a number. The number of Pythagorean triples  $(a, b, c)$  that exist in the range  $1 \leq c \leq N$

### Example

Input	Output
1	0
10	2
100	52
0	