# Counting Pythagorean Triples

We define a Pythagorean triple as a set of three positive integers $a$, $b$ and $c$ which satisfy $a^2 + b^2 = c^2$.

Let $P(N)$ denote the number of Pythagorean triples whose hypotenuses ($= c$) are less than or equal to $N$ (i.e. $c \le N$).

Your task is to find $P(N)$.

## Input

The first line of input contains a positive integer $N$.

## Output

Print on a single line the value of $P(N)$.

## Constraints

$1 \le N \le 1234567891011$

## Example

**Input1:**
5

**Output1:**
1

**Input2:**
15

**Output2:**
4

**Input3:**
10000

**Output3:**
12471

**Input4:**
1000000000000

**Output4:**
4179478903392

## Explanation for Input2

There are four Pythagorean triples: $\{3, 4, 5\}$, $\{5, 12, 13\}$, $\{6, 8, 10\}$, $\{9, 12, 15\}$

## Information

There are 15 test cases.

The sum of the time limits is 93 sec. (My solution runs in 14.03 sec.)

**Source Limit is 5 KB**