Logo

STUDENT REPORT

DETAILS

Name

SAMALA JAHNAVI

Roll Number

23D21A05H4

EXPERIMENT

Title

SOLVE THE EQUATION

Description

Given an integer N, your task is to find and return the number of sets of 3 positive integers a, b and c. that satisfy the following equation:

$a^2+b^2+c^2+ab+bc+ca = N$

Note: a, b and c ore positive integers, and their values can be the same.

Input Specification:

input1: An integer value N

Output Specification:

Return an integer value, representing the number of sets of three positive integers that satisfy the equation given above.

Sample Input:

6

Sample Output:

1

Explanation:

The only pair (a,b,c) possible is (1,1,1)

Source Code:

```
N = int(input())
def count_sets(N):
    count = 0
    for a in range(1, N+1):
        for b in range(1,N+1):
            for c in range(1,N+1):
                if a**2+b**2+c**2+a*b+b*c+c*a == N:
                    count += 1
    return count
print(count_sets(N))
```

RESULT

5 / 5 Test Cases Passed | 100 %