

C. Cube Problem

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Yaroslav, Andrey and Roman love playing cubes. Sometimes they get together and play cubes for hours and hours!

Today they got together again and they are playing cubes. Yaroslav took unit cubes and composed them into an $a \times a \times a$ cube, Andrey made a $b \times b \times b$ cube and Roman made a $c \times c \times c$ cube. After that the game was finished and the guys left. But later, Vitaly entered the room. He saw the cubes and wanted to make a cube as well. But what size should the cube be? Of course it should be a large cube with the side of length $a + b + c$. Besides, Vitaly decided to decompose the cubes built by Yaroslav, Andrey and Roman and compose his own large cube out of them. However, it turned out that the unit cubes he got from destroying the three cubes just weren't enough to make a large cube. We know that Vitaly was short of exactly n cubes. Vitaly got upset, demolished everything and left. As he was leaving, he met Petya and told him that there had been three cubes in the room and that he needed another n unit cubes to make his own large cube.

Petya entered the room and saw the messily scattered cubes. He wanted to make it neat and orderly again. But he only knows that there had been three cubes, made of small unit cubes and that Vitaly needed n more unit cubes to make a large one! Help Petya understand, how many ways of sizes a, b, c are there to restore Yaroslav's, Andrey's and Roman's cubes.

Input

The single line of the input contains integer n ($1 \leq n \leq 10^{14}$). We know that all numbers a, b, c are positive integers.

Please, do not use the `%lld` specifier to read or write 64-bit integers in C++. It is preferred to use the `cin`, `cout` streams or the `%I64d` specifier.

Output

In the single line print the required number of ways. If it turns out that there isn't a single way of suitable sizes of a, b, c , print 0.

Examples

input
24
output
1

input
648
output
7

input
5
output
0

input
93163582512000

output

39090