13196   Solve this Equation

Find number of solutions to the integer equation: $36a^2 + 18b^2 + 6c^2 = 5*N$, where N is a square (i.e., $N = n^2$ for some integer n), where a, b, c are integers.

Input

A number of of inputs (≤ 1000), each start with the number of value of integer N ($|N| < 1000000$).

Output

Output the number of solutions. Output '-1', if there is an infinite number of solutions.

Sample Input

```
0
4
```

Sample Output

```
1
0
```