

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 ( $\leq 1000$ ), 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