

All the positive numbers can be expressed as a sum of one, two or more consecutive positive integers. For example 9 can be expressed in three such ways,  $2+3+4$ ,  $4+5$  or 9. Given an integer less than  $(9 \cdot 10^{14} + 1)$  or  $(9E14 + 1)$  you will have to determine in how many ways that number can be expressed as summation of consecutive numbers.

## Input

The input file contains less than 1100 lines of input. Each line contains a single integer  $N$  ( $0 \leq N \leq 9^{14}$ ). Input is terminated by end of file.

## Output

For each line of input produce one line of output. This line contains an integer which tells in how many ways  $N$  can be expressed as summation of consecutive integers.

## Sample Input

```
9
11
12
```

## Sample Output

```
3
2
2
```