

Problem 4 : Harmonic mean

Problem

In this problem, you have to find the number of all possible pairs (a, b) , such that $0 < a < b \leq n$, harmonic mean of a and b is an even integer, and a , b and half of their harmonic mean do not have any common factor between them.

Input

Input consists of several lines. Each line has a number, n . The input is terminated by the case $n = 0$. This case should not be processed. n will always fit in a signed 16-bit integer representation.

Output

For each input number n , print the number of pairs (a, b) as specified above. Print the answer for each case on a separate line.

Sample Input

```
10
12
0
```

Sample Output

```
1
2
```