Median Modulo

Time limit: 3.0s **Memory limit:** 256M

You are given a positive integer N. Calculate the lower median of the numbers $N \bmod 1, N \bmod 2, N \bmod 3, \ldots, N \bmod N$.

The lower median of a sequence of k numbers is the number at position $\lfloor \frac{k+1}{2} \rfloor$ when the sequence is sorted. For example, the lower median of the sequence $1, 3, 5, 7$ is 3 and the lower median of the sequence $1, 1, 2, 3, 5$ is 2.

Input Specification

The first and only line of input contains the integer N.

Constraints

Subtask 1 [10%]

$1 \leq N \leq 10^6$

Subtask 2 [20%]

$1 \leq N \leq 10^9$

Subtask 3 [20%]

$1 \leq N \leq 10^{12}$

Subtask 4 [25%]

$1 \leq N \leq 10^{15}$

Subtask 5 [25%]

$1 \leq N \leq 10^{18}$

Output Specification

Output one number: the lower median in the problem statement.

Sample Input 1

```
7
```

Sample Output 1

```
1
```

Explanation for Sample Output 1

The sequence $7 \bmod 1, 7 \bmod 2, 7 \bmod 3, 7 \bmod 4, 7 \bmod 5, 7 \bmod 6, 7 \bmod 7$ is equal to $0, 1, 1, 3, 2, 1, 0$. When sorted, this becomes $0, 0, 1, 1, 1, 2, 3$. The lower median is the 4^{th} element of this sorted sequence, which is 1.

Sample Input 2

```
50
```

Sample Output 2

```
6
```