Problem F6402
Weird Sequence

One day you got a weird sequence of numbers.

```
1 1 2 1 2 2 3 1 2 2 3 2 3 3 4 1 ...
```

At the first glance, the sequence looks meaningless. So you decide to remove all the odd index term, then you see the following sequence

```
1 1 2 1 2 2 3 1 ...
```

, which is exactly the same as original sequence(at least for the first few terms)!

Then you re move all the even index term and the first term, then you see the following sequence

```
2 2 3 2 3 3 4 2 ...
```

, which can be obtained by adding 1 to the even index terms(at least for the first few terms)!

You think you find the pattern of this sequence. The first term is defined to be 1. The n-th term will have the same value with $\frac{n}{2}$-th term if n is even. The n-th term will be one more than the previous term if $n > 1$ and n is odd. If your observation is correct, what will be the value of n-th term of this sequence?

Input

The first line consist of a single integer $n(1 \leq n \leq 100)$, denoting the index of the term to be computed.

Output

Print a single integer on a line, the n-th term of the given sequence if your observation is correct.

Sample Input

```
17
```

Sample Output

```
2
```