Problem D. Divisibility By Factorial

Time limit: 1 second
Memory limit: 1024 mebibytes

In combinatorics, the notation $n!!$ is used to compute the product of all positive integers less than or equal to n that have the same parity. That is, for an odd n, $n!!$ is equal to the product of all odd positive integers not exceeding n, and for an even n — the product of all even positive integers not exceeding n.

Given a number n, find the maximum k such that $n!!$ is divisible by $k!$.

Input

The first line of the input contains a single integer n ($1 \le n \le 10^{18}$).

Output

Output a single integer — the answer to the problem.

Examples

standard input	standard output
1	1
2	2