

A. Odd Divisor

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

You are given an integer n . Check if n has an **odd** divisor, greater than one (does there exist such a number x ($x > 1$) that n is divisible by x and x is odd).

For example, if $n = 6$, then there is $x = 3$. If $n = 4$, then such a number does not exist.

Input

The first line contains one integer t ($1 \leq t \leq 10^4$) — the number of test cases. Then t test cases follow.

Each test case contains one integer n ($2 \leq n \leq 10^{14}$).

Please note, that the input for some test cases won't fit into 32-bit integer type, so you should use at least 64-bit integer type in your programming language.

Output

For each test case, output on a separate line:

- "YES" if n has an **odd** divisor, greater than one;
- "NO" otherwise.

You can output "YES" and "NO" in any case (for example, the strings yEs, yes, Yes and YES will be recognized as positive).

Example

input	Copy
6 2 3 4 5 998244353 1099511627776	
output	Copy
NO YES NO YES YES YES NO	

Codeforces Round #697 (Div. 3)

Finished

→ Virtual participation

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→ Problem tags

math number theory *900

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 



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