PON - Prime or Not

Given the number, you are to answer the question: "Is it prime?"

Solutions to this problem can be submitted in C, C++, Pascal, Perl, Python, Ruby, Lisp, Hask, Ocaml, Prolog, Whitespace, Brainf**k and Intercal only.

Input

t – the number of test cases, then t test cases follows. [t <= 500]
Each line contains one integer: N [2 <= N <= 2^63-1]

Output

For each test case output string "YES" if given number is prime and "NO" otherwise.

Example

```
Input:
5
2
3
4
5
6

Output:
YES
YES
NO
YES
NO
```