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## PRIONPRI - Prime or not Prime!

#simple-math ([/problems/tag/simple-math](/problems/tag/simple-math/)) #basics ([/problems/tag/basics](/problems/tag/basics/))

In this problem, your task is to determine if a given number is a prime number or a composite number.

### Input

The first line of the input contains an integer **T** denoting the number of test cases. The description of **T** test cases follows. Each test case consists of a single line containing a single integer « **n** » ( $2 \leq n \leq 10^9$ ).

### Output

For each test case, your program should output a single line containing « YES » (without quotes and spaces) if the given integer is prime or « NO » (without quotes and spaces) if the given integer is a composite number.

### Example

**Input:**

```
6
16
127
256
513
2048
5097
```

**Output:**

```
NO
YES
NO
NO
NO
NO
```

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