

Primes 3

Time limit: 1.0s **Memory limit:** 16M

Given T ($1 \leq T \leq 100$) positive integers, one per line, determine whether each one is prime. The integers will be no greater than $2^{63} - 1$.

The first line of input will be the integer T . The next T lines each contain a number to be tested.

For each of the T integers, you should output on a separate line `PRIME` if the corresponding integer is prime, or `NOT` if it is not prime.

Sample Input

```
5
1
2
6
11
1000000000000000000
```

Sample Output

```
NOT
PRIME
NOT
PRIME
NOT
```