ICPC Assiut University Community

Newcomers Training , Do Your Best



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PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

U. T-primes

time limit per test: 2 seconds¹ memory limit per test: 256 megabytes

We know that prime numbers are positive integers that have exactly two distinct positive divisors. Similarly, we'll call a positive integer t <u>T-prime</u>, if t has exactly three distinct positive divisors.

You are given an array of *n* positive integers. For each of them determine whether it is T-prime or not.

Input

The first line contains a single positive integer, n ($1 \le n \le 10^5$), showing how many numbers are in the array. The next line contains n space-separated integers x_i ($1 \le x_i \le 10^{12}$).

Please, do not use the %11d specifier to read or write 64-bit integers in C++. It is advised to use the cin, cout streams or the %164d specifier.

Output

Print n lines: the i-th line should contain "YES" (without the quotes), if number x_i is T-prime, and "NO" (without the quotes), if it isn't.

Examples



→ Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

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Spectator



$\rightarrow \textbf{About Group}$

Note

The given test has three numbers. The first number 4 has exactly three divisors — 1, 2 and 4, thus the answer for this number is "YES". The second number 5 has two divisors (1 and 5), and the third number 6 has four divisors (1, 2, 3, 6), hence the answer for them is " \mathbb{N} \mathbb{O} ".



Group website

→ **Group Contests**

- Sheet #10 (General Hard)
- Sheet #9 (General medium)
- Sheet #8 (General easy)
- Sheet #7 (Recursion)
- Sheet #6 (Math Geometry)
- Sheet #5 (Functions)
- Sheet #4 (Strings)
- Contest #3.1
- Sheet #3 (Arrays)
- Contest #2
- Sheet #2 (Loops)
- Contest #1

• Sheet #1 (Data type - Conditions)

Sheet #9 (General medium)

Finished

Practice



→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Submit?

Language: GNU G++23 14.2 (64 bit, ms) ✓

Choose file:

Choose File No file chosen

Submit

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