



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

## I. Omar and Trees

time limit per test: 1 second memory limit per test: 256 megabytes

When Omar was at school, his teacher gave him a challenge, and Omar accepted it.

The teacher gave Omar a tree of n nodes (node 1 is the root). The  $i_{th}$  node has a value  $a_i$ .

Then the teacher asked Omar q queries of two types:

- Update the value in every node in the subtree rooted with u to val (u included).
- Determine if the sum of all nodes in the subtree with root u can be represented as the sum of two prime numbers or not (u included).

Omar asks for your help in this challenge.

### Input

The first line contains one integer n ( $1 \le n \le 10^5$ ).

The second line contains n integers  $(1 \le a_i \le 10^5)$ —the value of each node.

For each n-1 lines, it contains two integers u and v  $(1 \le u, v \le n, u \ne v)$  – indices of nodes connected by an edge.

Then the number of queries q ( $1 \le q \le 10^5$ ).

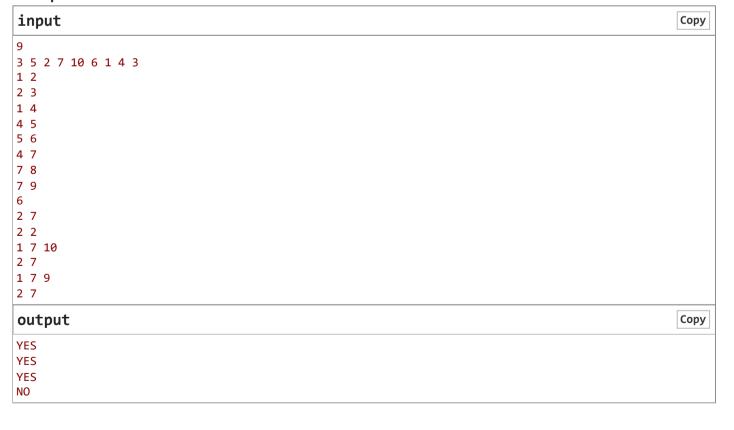
Each query format is one of the following:

- 1 u val: Update the value in every node in the subtree rooted with u to val  $(1 \le val \le 10^5)$ .
- 2 *u*: Determine if the sum of all nodes in the subtree with root *u* can be represented as the sum of two prime numbers or not.

## Output

For each query of the second type, print "YES" without quotes if the sum of all nodes in the subtree with root u can be represented as the sum of two prime numbers or not, "NO" without quotes otherwise.

## Example



# TCPC Tunisian Collegiate Programming Contest 2022

### **Finished**

### **Practice**



### → 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

### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest



| → Last submissions |                      |                         |
|--------------------|----------------------|-------------------------|
| Submission         | Time                 | Verdict                 |
| 317683350          | Apr/29/2025<br>03:30 | Accepted                |
| 317683172          | Apr/29/2025<br>03:23 | Wrong answer on test 2  |
| 317528948          | Apr/28/2025<br>06:22 | Accepted                |
| 317511131          | Apr/27/2025<br>23:28 | Accepted                |
| 317511105          | Apr/27/2025<br>23:27 | Wrong answer on test 5  |
| 317510309          | Apr/27/2025<br>23:19 | Accepted                |
| 317510267          | Apr/27/2025<br>23:18 | Runtime error on test 5 |
| 317510199          | Apr/27/2025<br>23:17 | Accepted                |
| 317510128          | Apr/27/2025<br>23:16 | Wrong answer on test 48 |
| 317510005          | Apr/27/2025<br>23:15 | Wrong answer on test 18 |