

## Problem B. Ocean Club



Ballon:  
Time limit: 1 seconds  
Memory limit: 512 megabytes

**Bi** is very fond of the Ocean series on HBO. Because she liked it so much, when she was in her class, she created her own Ocean club. To practice skills like the characters in the movie, **Bi** gave a math problem to its members practice as follows: **Bi**'s Ocean club has  $n$  members with a list of home address numbers  $A = \{a_1, a_2, \dots, a_n\}$ . The association's communication rules are from small house address numbers to larger house address numbers and primes together. **Bi** requires members to calculate quickly to transmit information from a house has an address  $a_i$  to  $a_j$  number another house address and must pass through  $k + 1$  people, how many ways are there?

The members of **Bi**'s Ocean Club are not good at it yet, so **Bi** ask you to help calculate.

### Input

The first line contains  $n$  is the number of members safety  $1 \leq n \leq 100$ .

The second line contains  $n$  integers is distinct  $a_1, a_2, \dots, a_n$  safety  $2 \leq a_i \leq 10^5$  - the list address.

The third line contains one integer  $Q$  safety  $1 \leq Q \leq 10^5$  — the number of query **Bi** will do.

The next  $Q$  lines contains three integers  $a_i, a_j, k$  safety  $a_i \leq a_j; a_i, a_j \in A; 1 \leq k \leq n$ .

### Output

Output  $Q$  lines, the  $i$  - *th* line should contain the  $i$  - *th* query result. Since the number of result is large, print it modulo 2023.

### Examples

standard input	standard output
7 2 3 4 5 6 7 8 1 2 8 3	3