Database Query II

Time: 1 sec / Memory: 256 MB

Problem Statement

Write a program to simulate the operations of querying a database.

There are N integers in the database and M query numbers.

For each query number, output the number of times the query number has appeared in the database.

For example, `3` appeared two times in `3 1 2 4 3 5`.
So you will output `2` for the query number `3`.

Input

The first line contains an integer N, where $1 \leq N \leq 10^5$, which is the size of the database. The second line contains N integers in the database, separated by spaces.
The third line contains an integer M, where $1 \leq M \leq 10^5$, which is the number of queries, and each of the following M lines contains a query integer.

Output

For each query integer, output the number of times it has appeared in the database in one line.

Example

Input1:

```
6
2  1  3  2  3  2
3
2
3
4
```

Output1:

```
3
2
0
```