Less Than X

time limit per test: 2 seconds
memory limit per test: 488.3 megabytes
input: standard input
output: standard output
points: 1 · problem code: lessthanx · author: jszqlew

Problem Statement

You are given a list x of n integers $x = [x_1, x_2, ..., x_n]$. You are also given q queries, for each query, you are give some integer k should output the number of unique integers less than k in x.

Input Format

Your first line will contain n and q. Your next line will contain n space-separated integers $x_1, x_2, ..., x_n$. Your next q lines will contain one integer each.

Output Format

For each query, you should output an integer representing the number of UNIQUE (non-duplicate) numbers (strictly) less than it in x.

Constraints

- $1 \leq n, q \leq 10^5$
- $-10^9 \leq x_i \leq 10^9$

Sample Cases

Input 1

```
10 3
1 4 4 5 6 -2 4 2 5 10
14
5
7
```

Output 1

```
7
4
6
```

Explanation 1

There are 7 integers less than 14, being $-2, 1, 2, 4, 5, 6, 10$. There are 4 integers less than 5, being $-2, 1, 2, 4$. There are 6 integers less than 7, being $-2, 1, 2, 4, 5, 6$.