Problem 3: Reversed Binary Search

(Easy)

Alice lives in Wonderland and has a **descending** array of integers A. She also has an array of integers Q that she is unsure whether are in A. Can you help her find the index (**1-based index**) of the integer Q_i in the array A?

Input Format

The first line contains the integers N and K, which represent the lengths of the arrays A and Q respectively.

The second line contains N integers separated by spaces, representing the numbers in the array A.

The third line contains K integers separated by spaces, representing the numbers in the array Q.

Constraints

- $1 \leq N, K \leq 10^6$
- $1 \leq A_i \leq 10^{14}$, where A_i represents an element in the array A
- $1 \leq Q_i \leq 10^{14}$, where Q_i represents an element in the array Q
- All elements in A are guarrenteed to be unique

The time limit for this problem is 2 seconds.

Output Format

Output K lines. On each line output a single integer p, representing the index of the number Q_i inside the array A. **If Q_i does not appear in A, output `0` instead**.

Sample Input

```
5 7
5 4 3 2 1
2 6 3 5 4 4 1
```

Sample Output

```
4
0
3
1
2
2
5
```