

Sorted Array

Given a sorted array of numbers. Count the number given in each query that exists in the array.

Format Input

The first line of the input contains 2 integers N and Q, number of elements in the array and number of queries. Second line contains N numbers A_i , the element of the array. The next Q lines contains an integer Z, the number to be searched.

Format Output

Output the count of existence number of the queries.

Constraints

$1 \leq N \leq 100\,000$

$1 \leq Q \leq 100\,000$

$-1\,000\,000\,000 \leq \text{Number} \leq 1\,000\,000\,000$

Sample Input (standard input)	Sample Output (standard output)
5 5 1 2 3 3 4 0 10 1 3 4	3

Note

If you use linear search, it will give you "Time Limit Exceed" verdict (?)