3. Bus Stand

There are *n* people standing in a queue for bus numbered from left to right, *1* to *n*. Each person has a patience limit, *p* and will only wait until the time *p* expires. If the bus reaches after time *p*, the person will leave the queue and miss the bus. Initially the bus is empty and has a fixed capacity, *k*. Given a number of queries *q*, where each query is a time of bus arrival, *q[i]*, for each query, print the index/number (1-indexed) of the k^{th} person who catches the bus. If all passengers remaining in the queue can board the bus, return *0* because there will be no k^{th} person.

For example, given a bus size *k = 2*, patience limits of *p = [1, 2, 3, 4]*, and queries at times *q = [1, 3, 4]*, there are three scenarios all dealing with the same initial queue. Where the bus arrives at *q[0] = 1*, all passengers are still queued but only the first two will fit on the bus. The last passenger who will fit is number *2*. If the bus arrives at *q[1] = 3*, passengers *1* and *2* have left the queue, the first two remaining *(3* and *4*) get on the bus, filling it to capacity. When *q[2] = 4*, passengers *1, 2* and *3* have left, so passenger *4* can get on. Since the bus is not filled, there is no k^{th} passenger . The returned array of answers is *[2, 4, 0]*.

Function Description

Complete the function *kthPerson* in the editor below. The function must return an array of integers where each integer *i* represents the results of a query, *q[i]*.

kthPerson has the following parameter(s):

k: an integer that represents the size of the bus

p[p[0],...p[n-1]]: an array of integers that represents the patience of *n* people from left to right

q[q[0],...q[j-1]]: an array of integers that represents the queries containing times *q[i]* of the arrival of the bus

Constraints

- *0 < n, k, q[i], p[i], q[j] ≤ 100000*

▼ Input Format For Custom Testing

The first line contains the capacity of the bus, *k*.
The second line contains the number of people in the queue, *n*.
The following *n* lines contain a single integer that represents the patience limit, *p* of each person.
The next line contains the number of queries, *j*.
The following *j* lines contain single integers that represents the time, *q[j]* of bus arrival.

▼ Sample Case 0

Sample Input For Custom Testing

```
3
3
2
5
3
2
1
5
```

Sample Output

```
3
0
```

Explanation

In the first query, the bus arrives at time *1*, so all three people can catch the bus and fill it to capacity. The last person who catches the bus is *3*.
In the second query, the bus arrives at time *5*. By this time first and the third person already leave the queue. So, only the second person can catch the bus. As the bus is not full, the answer is 0.