

## Problem: Circular Array Rotation

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John Watson performs an operation called a *right circular rotation* on an array of integers,  $a$ . After performing one *right circular rotation* operation, the array is transformed from  $a$  to  $a'$ .

Watson performs this operation  $k$  times. To test Sherlock's ability to identify the current element at a particular position in the rotated array, Watson asks  $q$  queries, where each query consists of a single integer,  $i$ , for which you must print the element at index  $i$  in the rotated array (i.e., the value of  $a'_i$ ).

### Input Format

The first line contains space-separated integers,  $n$ ,  $k$ , and  $q$ , respectively.

The second line contains space-separated integers, where each integer  $a_i$  describes array element  $a_i$  (where  $0 \leq i < n$ ).

Each of the  $q$  subsequent lines contains a single integer denoting  $i$ .

### Constraints

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### Output Format

For each query, print the value of the element at index  $i$  of the rotated array on a new line.

### Sample Input 0

```
3 2 3
1 2 3
0
1
2
```

### Sample Output 0

```
2
3
1
```

### Explanation 0

After the first rotation, the array becomes  $[2, 3, 1]$ .

After the second (and final) rotation, the array becomes  $[3, 1, 2]$ .

Let's refer to the array's final state as `array` . For each query, we just have to print the value of `array[index]` on a new line:

1. `array[0]` , so we print `array[0]` on a new line.
2. `array[1]` , so we print `array[1]` on a new line.
3. `array[2]` , so we print `array[2]` on a new line.

## Solution

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```
int main()
{
    long size, queries, rotations, index;
    cin>>size >>rotations >>queries;
    long array[size];

    /*Feeding the data*/
    for(long i=0; i<size; i++)
    {
        cin>>array[i];
    }

    /*Handling the queries*/
    for(int i=0; i<queries; i++)
    {
        cin>>index;
        cout<<array[ (index + rotations*(size-1) )%size]<<endl;
    }

    return 0;
}
```