



Circular Array Rotation



by darkshadows

Problem

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John Watson performs an operation called a *right circular rotation* on an array of integers, $[a_0, a_1, \dots, a_{n-1}]$. After performing one *right circular rotation* operation, the array is transformed from $[a_0, a_1, \dots, a_{n-1}]$ to $[a_{n-1}, a_0, \dots, a_{n-2}]$.

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, m , for which you must print the element at index m in the rotated array (i.e., the value of a_m).

Input Format

The first line contains 3 space-separated integers, n , k , and q , respectively.

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

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

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq a_i \leq 10^5$
- $1 \leq k \leq 10^5$
- $1 \leq q \leq 500$
- $0 \leq m \leq N - 1$

Output Format

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

Sample Input

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

Sample Output

```
2
3
1
```

Explanation

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

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

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

1. $m = 0$, so we print **2** on a new line.
2. $m = 1$, so we print **3** on a new line.
3. $m = 2$, so we print **1** on a new line.

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Submissions: 30103



Max Score: 20



Difficulty: Easy

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C#  

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 class Solution {
5     static void Main(String[] args) {
6         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution
7         */
8     }
9 }
```

Line: 1 Col: 1

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