

Florence Javascript Code Challenge

Please implement a solution in javascript (no additional libraries or dependencies) for the following problem. The solution should be one file named `index.js` which produces the sample output specified on page 2 when run with the command `node index.js`. Your solution should reflect coding best practices in terms of style and organization. Please submit a summary of the work you did, decisions you made, and the performance implications of your solution. Please indicate roughly how long the challenge took you. If you have any questions please email Kevin at kevin.carlson@florencehc.com

Problem:

Given a sorted and rotated array (rotated at some point) $A[]$, and given an element K , the task is to find the index of the given element K in the array $A[]$. The array has no duplicate elements. If the element does not exist in the array, print -1 .

Input:

Parse multi line input which has the following form. The first line of the input contains an integer T , depicting the total number of test cases. Then T test cases follow. Each test case consists of three lines. First line of each test case contains an integer N denoting the size of the given array. Second line of each test case contains N space separated integers denoting the elements of the array $A[]$. Third line of each test case contains an integer K denoting the element to be searched in the array.

Output:

Corresponding to each test case, print in a new line, the index of the element found in the array. If element is not present, then print -1 .

If there is more than one test case, print the output for other test cases in successive lines (see sample output).

Code evaluation is based on your output, please follow the sample format and do NOT print anything else.

Constraints:

$$1 \leq T \leq 100$$

$$1 \leq N \leq 100005$$

$$0 \leq A[i] \leq 10000005$$

$$1 \leq k \leq 100005$$

Sample Input:

```
3
9
5 6 7 8 9 10 1 2 3
10
3
3 1 2
1
4
3 5 1 2
6
```

Sample Output:

```
5
1
-1
```