Rotate array

You have been given a random integer array/list(ARR) of size N. Write a function that rotates the given array/list by D elements(towards the left).

Note:

Change in the input array/list itself. You don't need to return or print the elements.

Input format :

The first line contains an Integer 't' which denotes the number of test cases or queries to be run. Then the test cases follow.

First line of each test case or query contains an integer 'N' representing the size of the array/list.

Second line contains 'N' single space separated integers representing the elements in the array/list.

Third line contains the value of 'D' by which the array/list needs to be rotated.

Output Format :

For each test case, print the rotated array/list in a row separated by a single space.

Output for every test case will be printed in a separate line.

Constraints :

1 <= t <= 10^4
0 <= N <= 10^6
0 <= D <= N
Time Limit: 1 sec

Sample Input 1:

```
1
7
1 2 3 4 5 6 7
2
```

Sample Output 1:

```
3 4 5 6 7 1 2
```

Sample Input 2:

```
2
7
1 2 3 4 5 6 7
0
4
1 2 3 4
2
```

Sample Output 2:

```
1 2 3 4 5 6 7
3 4 1 2
```

Second Largest in array

You have been given a random integer array/list(ARR) of size N. You are required to find and return the second largest element present in the array/list.

Input format :

The first line contains an integer 'N' representing the size of the array/list.

The second line contains 'N' single space separated integers representing the elements in the array/list.

Output Format :

Return the second largest element in the array/list.

Constraints :

0 <= N <= 10^2
1<=arr[i]<=10^3

Time Limit: 1 sec

Sample Input 1:

5
4 3 10 9 2

Sample Output 1:

9

Sample Input 2:

7
13 6 31 14 29 44 3

Sample Output 2:

31

Sort 0 1 2

You are given an integer array/list(ARR) of size N. It contains only 0s, 1s and 2s. Write a solution to sort this array/list in a 'single scan'.

'Single Scan' refers to iterating over the array/list just once or to put it in other words, you will be visiting each element in the array/list just once.

Note:

You need to change in the given array/list itself. Hence, no need to return or print anything.

Input format :

The first line contains an Integer 't' which denotes the number of test cases or queries to be run. Then the test cases follow.

First line of each test case or query contains an integer 'N' representing the size of the array/list.

Second line contains 'N' single space separated integers(all 0s, 1s and 2s) representing the elements in the array/list.

Output Format :

For each test case, print the sorted array/list elements in a row separated by a single space.

Output for every test case will be printed in a separate line.

Constraints :

1 <= t <= 10^2
0 <= N <= 10^5
Time Limit: 1 sec

Sample Input 1:

```
1
7
0 1 2 0 2 0 1
```

Sample Output 1:

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

Sample Input 2:

```
2
5
2 2 0 1 1
7
0 1 2 0 1 2 0
```

Sample Output 2:

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