Given an array of positive integers **A**, find the first greater number for every element on its right. If a greater number does not exist, use -1.

**Example:**

Input: [1, 5, 2, 3, 5]  
Output: [5, -1, 3, 5, -1]

**Input Format**

The first line contains an integer ‘T’, denoting the number of test cases.

For each test case the input has two lines:

* An integer ‘n’ denoting the length of the array.
* *n* space-separated integers denoting elements of the array.

**Output Format**

For each test case, a line containing space-separated elements of the result.

**Sample Input**

4

5

1 5 2 3 5

4

1 2 3 4

5

3 2 1 4 5

4

4 3 2 1

**Expected Output**

5 -1 3 5 -1

2 3 4 -1

4 4 4 5 -1

-1 -1 -1 -1

**Constraints**

1 <= T <= 100  
1 <= n <= 104  
1 <= Ai <= 105