

Maximum Threshold

Given an array A of N numbers. Threshold of subarray is defined as the value of minimum element in the subarray. Find maximum threshold among all contiguous subarrays of size y ,
where $1 \leq y \leq N$

Input :

First line contains number of test cases T.

For each test-case:

First line contains number N

Next line contains N values denoting A_i .

Output:

Print n numbers in one line. For each y from 1 to n ,print maximum threshold among all subarrays of size y.

Constraints:

$1 \leq T \leq 20$

$1 \leq N \leq 10^5$

$1 \leq A[i] \leq 10^9$

Time Limit : 2 sec

Memory Limit : 256 MB

Sample Input

2

3

1 2 3

10

1 2 3 4 5 6 5 4 3 2

Sample Output

3 2 1

6 5 5 4 4 3 3 2 2 1