

First negative integer in every window of size k

Problem Statements :

You are given an array and a positive integer k, find the first negative integer for each and every window(contiguous subarray) of size k. If a window does not contain a negative integer, then print 0 for that window.

Input Format :

First line contains integer t as number of test cases.

Each test case contains two lines. First line contains two integers n and k where n is length of the array and k is the size of window and second line contains n space separated integer.

Constraints :

$1 < t < 10$

$1 < n, k < 10000000$

Output Format :

For each test case you have to print the required output as given below.

Sample Input :

```
2
8 3
12 -1 -7 8 -15 30 16 28
8 4
12 -1 -7 8 -15 30 16 28
```

Sample Output :

```
-1 -1 -7 -15 -15 0
-1 -1 -7 -15 -15
```

Explanation :

For first test case : Subarray of window size 3 is (12 -1 -7), (-1, -7, 8), and so on.. Take first negative number from each window and print them.

Time Limit :

1 sec