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# Largest Rectangle





? Ask Doubt

 Time-Limit: 1 sec

 Score: 0/100

Difficulty :  

 Memory: 256 MB

 Accepted Submissions: 100

Relevant For: 

AZ-201

Description

You have to find the largest rectangular area possible in a given histogram where the largest rectangle can be made of contiguous bars. Assume that all bars have the same width and the width is 1 unit.

Input Format

The first line of the input contains one integer  $T$  - the number of test cases. Then  $T$  test cases follow.  
The first line of each test case contains one integer  $N$  - the length of the array.  
The second line of each test case contains  $N$  space-separated integers, where  $H_i$  denotes the height of the  $i$ th bar.

Output Format

For each test case, print the largest area of the rectangle in the histogram.

Constraints

$1 \leq T \leq 100$   
 $1 \leq N \leq 10^5$   
 $1 \leq H_i \leq 10^5$

Sample Input 1

Copy

```
3
3
2 1 2
4
1 2 3 4
4
5 4 1 2
```

Sample Output 1

Copy

```
3
6
8
```

C++14[GCC] ▾



1

Submit

