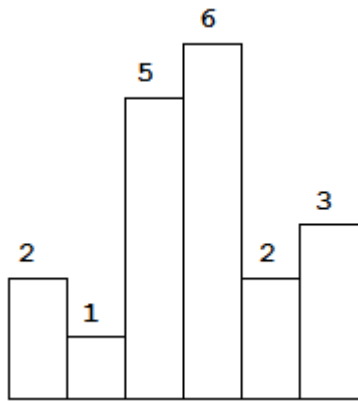
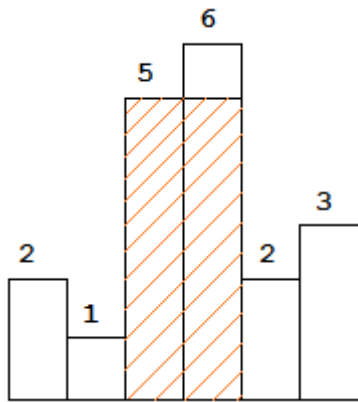


### Largest Rectangle in Histogram

Given,  $n$  non-negative integers representing the histogram's bar height where the width of each bar is 1, find the area of largest rectangle in the histogram.



Above is a histogram where width of each bar is 1, given height = [2,1,5,6,2,3].



The largest rectangle is shown in the shaded area, which has area = 10 unit.

Input	Output
6	10
2 1 5 6 2 3	12
7	14
6 2 5 4 5 1 6	
7	
6 2 5 4 5 2 6	

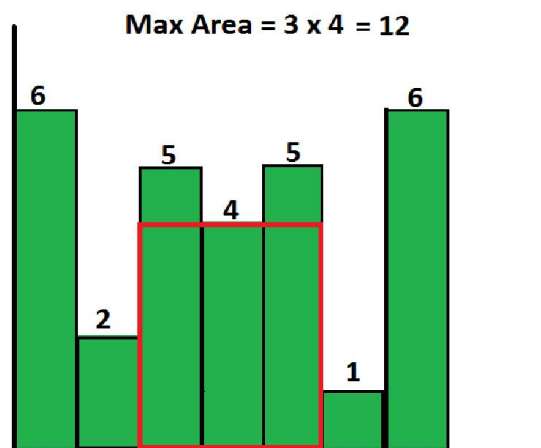


Figure for test case 2.