

Largest Rectangle In Histogram

Given an array of integers heights representing the histogram's bar height where the width of each bar is 1, return the area of the largest rectangle in the histogram.

Constraints:

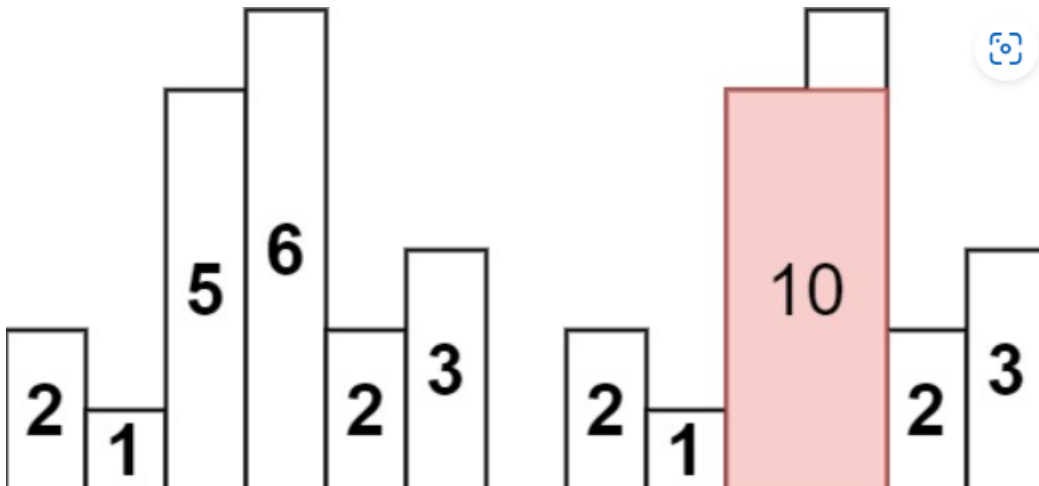
$1 \leq \text{heights.length} \leq 10^5$.

$-0 \leq \text{heights}[i] \leq 10^4$.

You must write an algorithm with $O(n)$ runtime complexity.

Example:

Input: 2 1 5 6 2 3	heights = [2,1,5,6,2,3]
Output: 10	10



Input: 2 4	heights = [2,4]
Output: 4	4