

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.

[2 , 1 , 5 , 6 , 2 , 3]

stack = [[index, height], [index, height] ...]

maxArea = 0

stack	
index	height
0	2
0	1
2	5
3	6
2	2
5	3

max area
2
6 10

if heights are not in increasing order, then pop

if the next number is smaller than preceeding bar (e.g. 3), assess size of preceeding bar (4), and pop 4

4 3

↑
.pop()

2 3 4 2

↑ .pop() rectangle = 4

↑ .pop() rectangle = 6

a) compute area

b) remove from consideration(.pop())