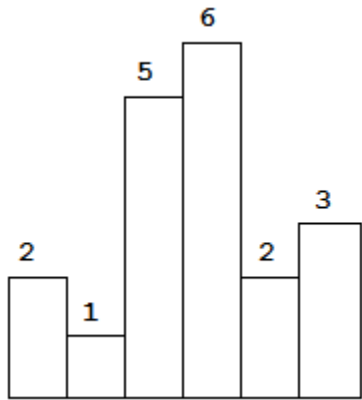
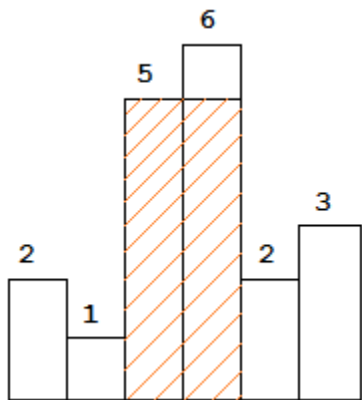


Given n non-negative integers representing the histogram's bar height where the width of each bar is 1, find the area of largest rectangle in the histogram.



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.

For example,

Given height = $[2, 1, 5, 6, 2, 3]$,

return 10.