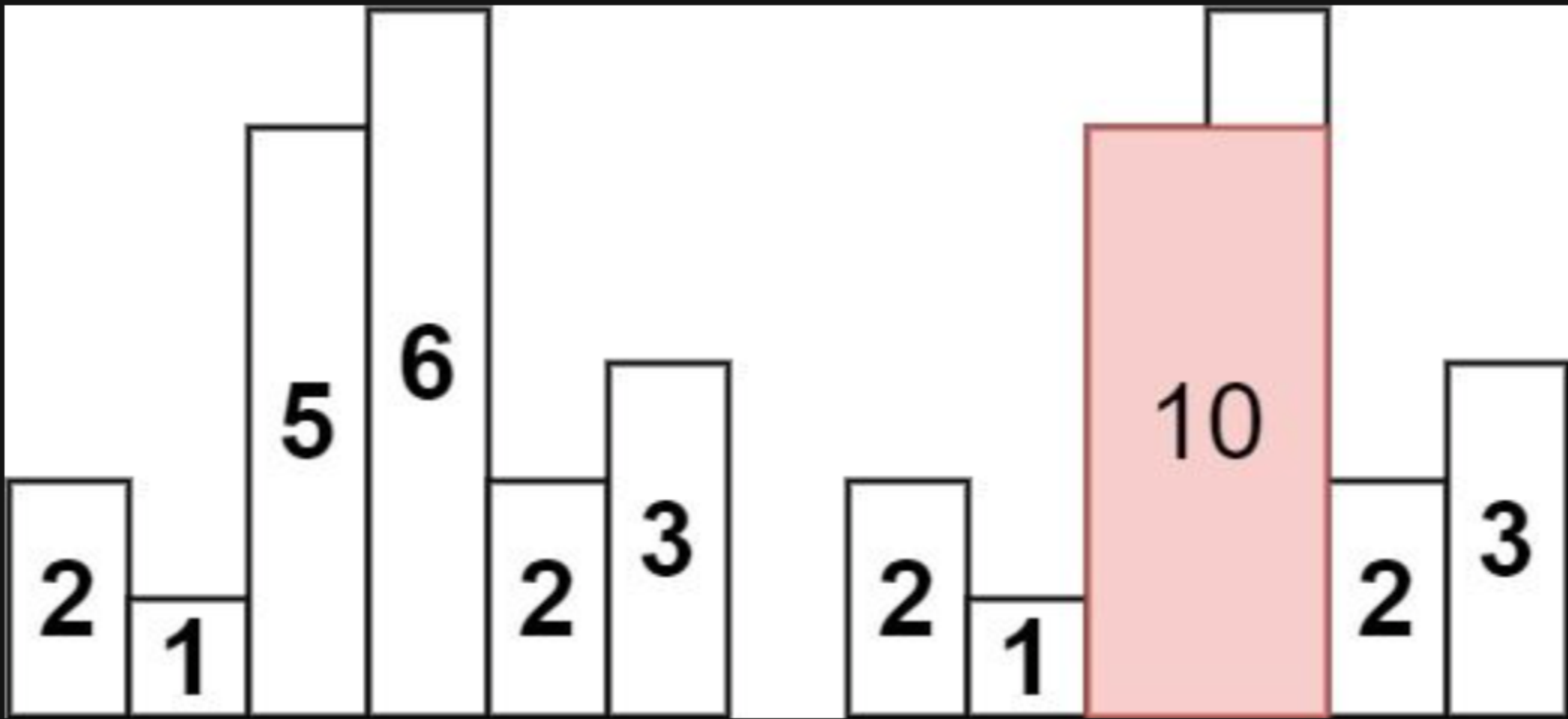


# 84. Largest Rectangle in Histogram

## Description

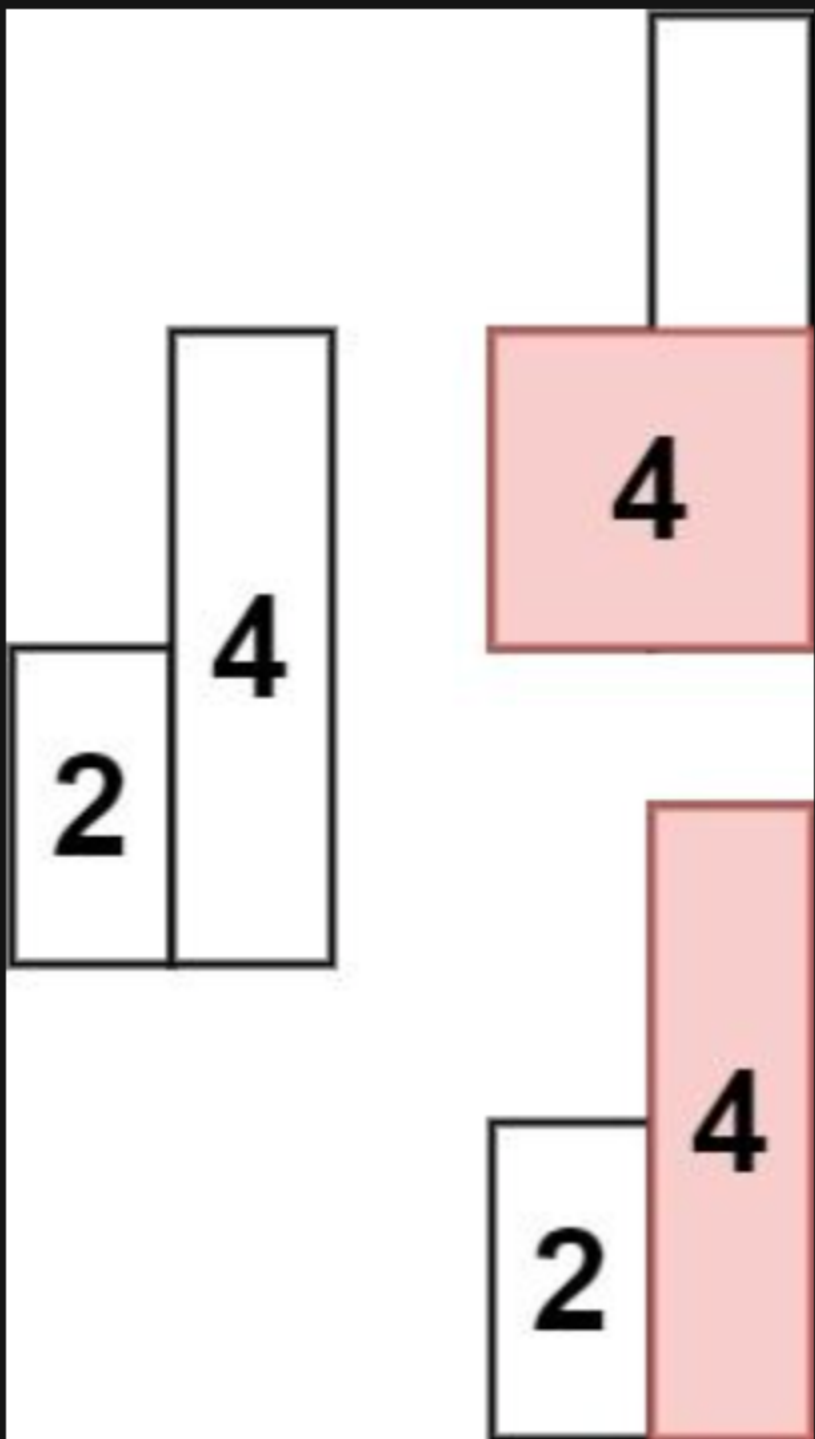
Given an array of integers `heights` representing the histogram's bar height where the width of each bar is `1`, return *the area of the largest rectangle in the histogram*.

### Example 1:



**Input:** heights = [2,1,5,6,2,3]  
**Output:** 10  
**Explanation:** The above is a histogram where width of each bar is 1.  
The largest rectangle is shown in the red area, which has an area = 10 units.

### Example 2:



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

### Constraints:

- `1 <= heights.length <= 105`
- `0 <= heights[i] <= 104`

