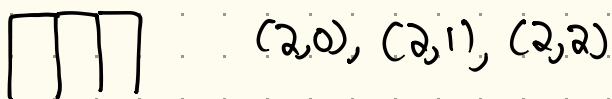
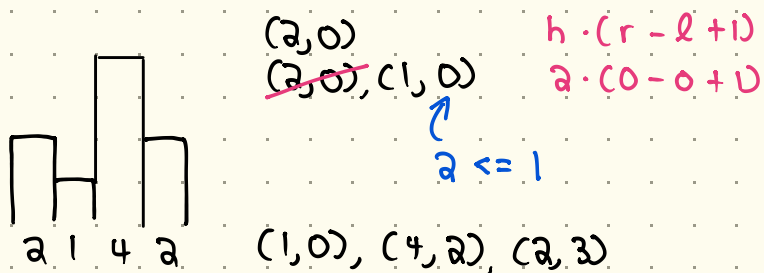


84. Largest Rectangle In History



Find the max area for each rectangle rooted at $heights[x]$

$\forall h \in heights$, calculate the area, one of them is the answer

An area of a rectangle is composed of $(r - l + 1) \cdot h$

Iterate through $heights + [0]$

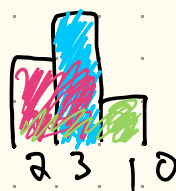
(h, l) - determined on processing the first (l, h)

① Process all rectangles in stack that are greater in height than the

(r) - determined on processing a side shorter than h

current $right_h$

$w = \underline{r - l} - l + 1$ inherent bar width



$right_x$ for the rectangle is $r - 1$

$max_area = \max(w \cdot left_h)$

① Add $(\underline{right_x}, right_y)$ to stack

$right_x$ extends to the leftmost popped in ①