Applications

- Computer uses postfix / prefix.
- prefix | postfix → × precedence

Q. Evaluate a postfix expression

Given a string ①, evaluate and find the final value.

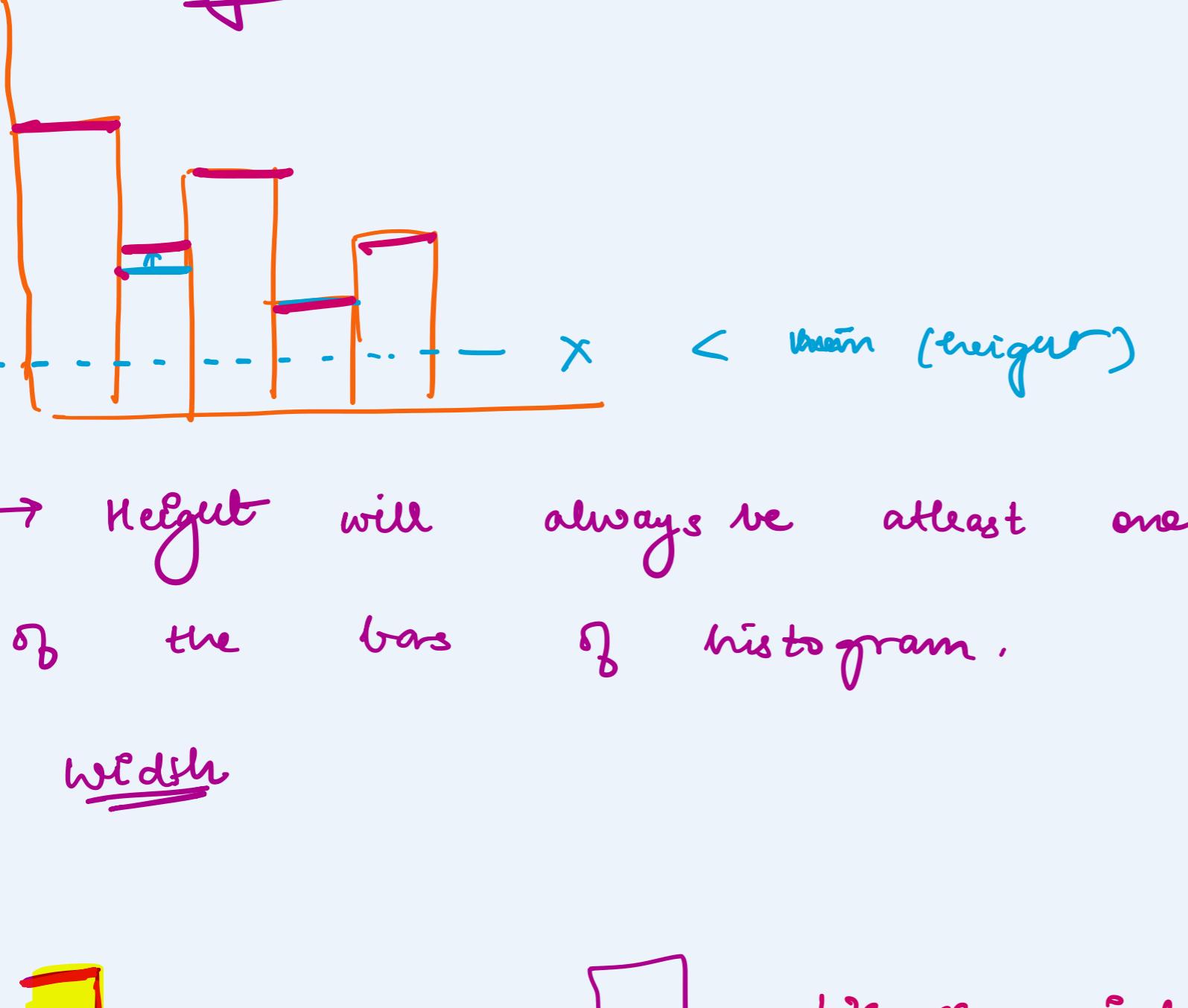
operators → *, /, +, -

$$\textcircled{1} \text{ Input } \rightarrow 2 \underline{3} 1 * + 9 -$$

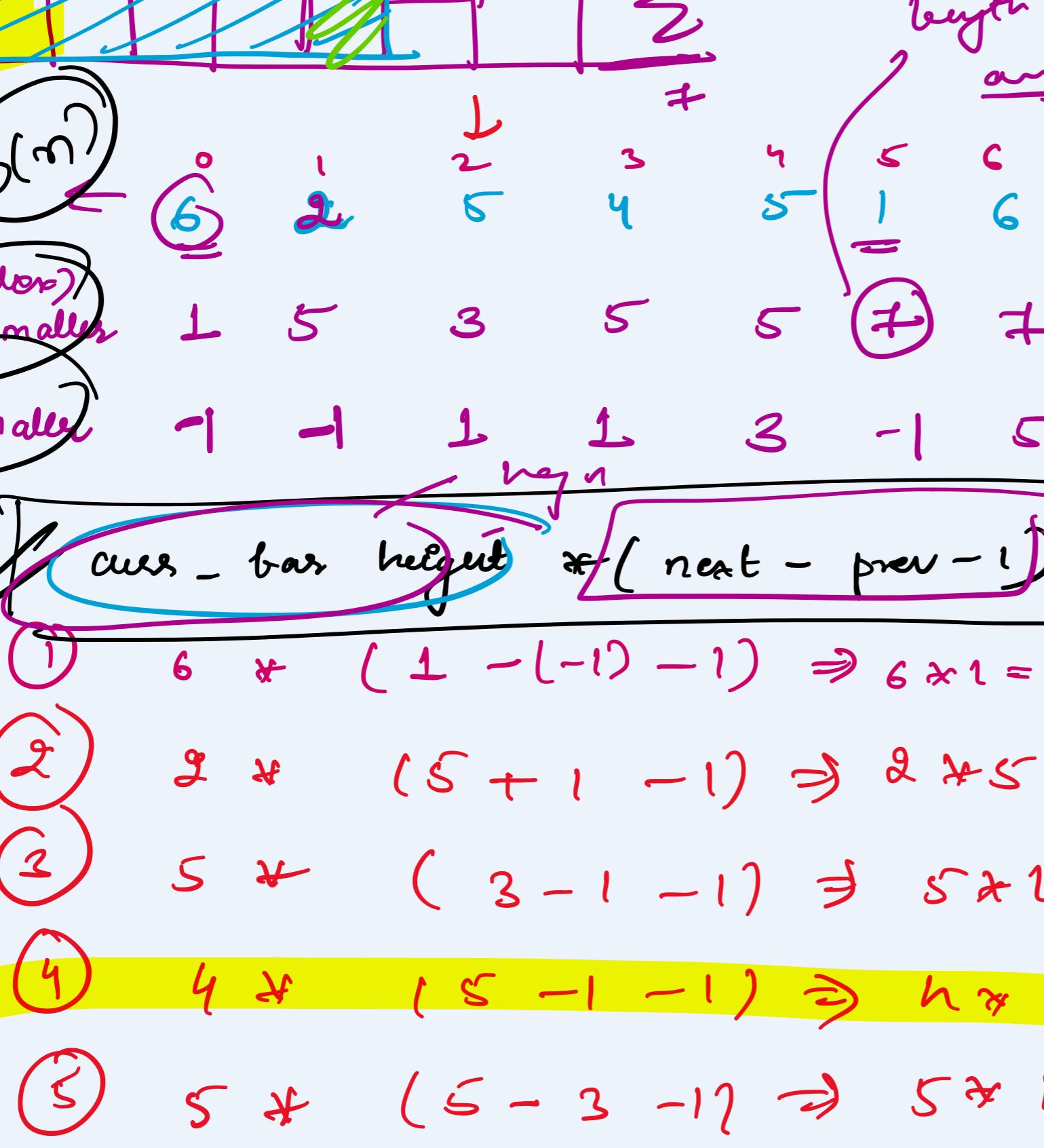
ans → -4

$$\textcircled{2} \text{ Input } \rightarrow 1 2 3 + * 8 -$$

ans → -3

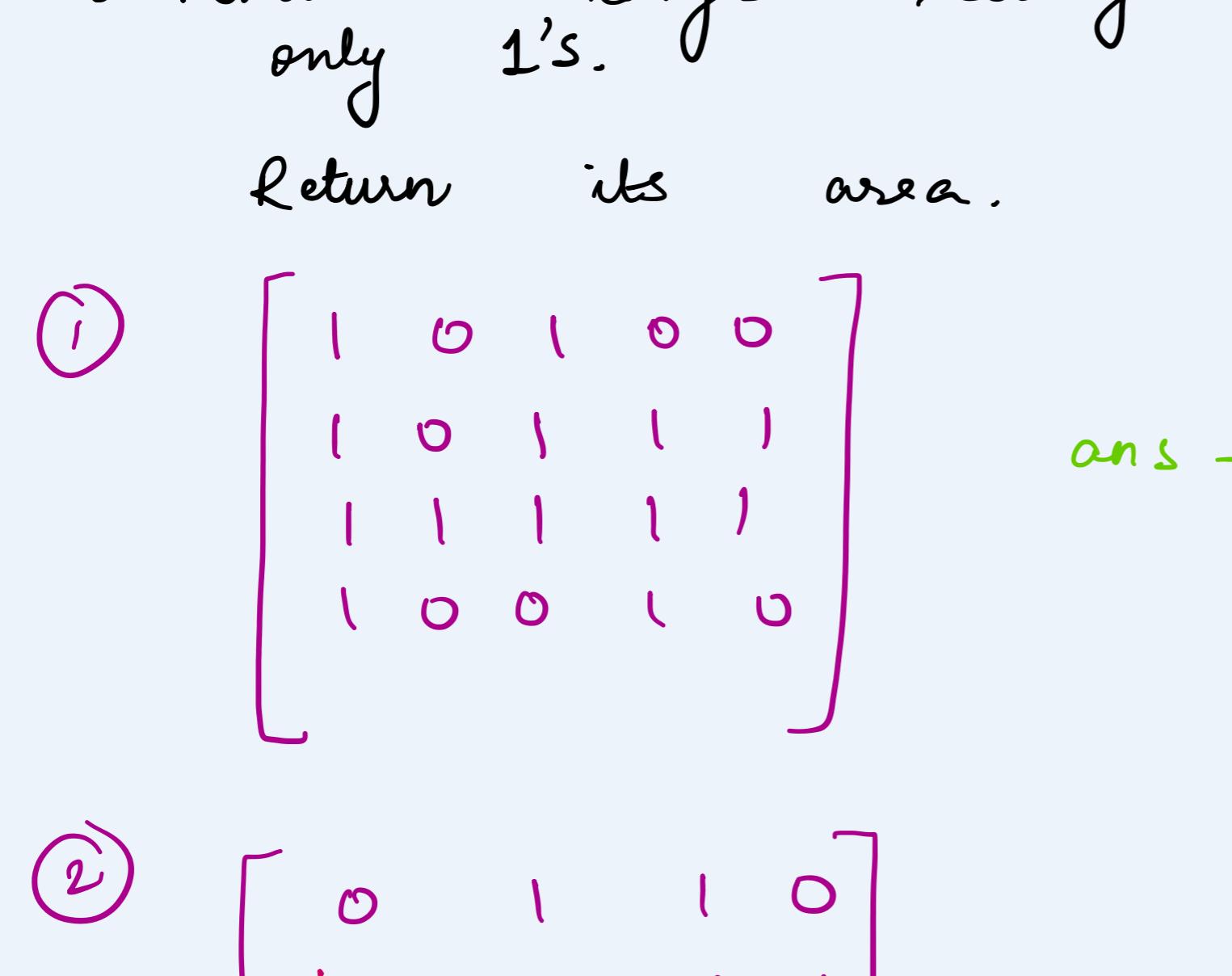


for ($i=0$) → $i = \text{str.length} - 1$
 if ($\text{ch} == \text{operator}$) {
 $a = s.pop();$
 $b = s.pop();$
 operation = a operator b;
 s.push(operation);
 } else {
 s.push(ch);
 }

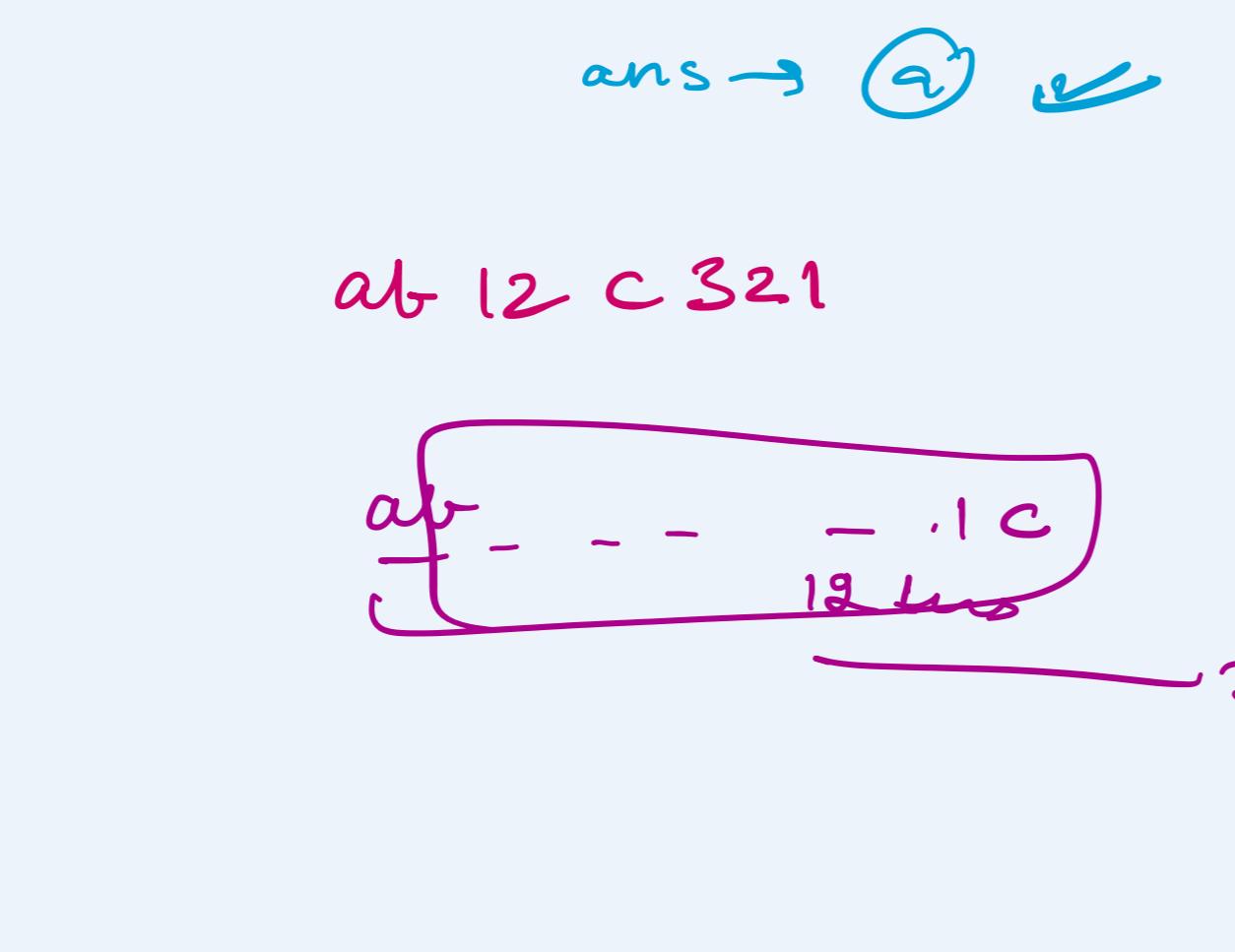
Histogram (Max area of histogram)

$$\text{max(Area)} \rightarrow (\text{height}) \times (\text{width})$$

→ Height



* For every bar, if it can be the end of the largest bars than the curr height on left as well as right.



TC → O(n)
 SC → O(1)

