

Ques: Given an array of integer elements
Find the next greater element on the right side of each element.

Eg: ① 4 5 2 25
ans: 5 25 25 -1

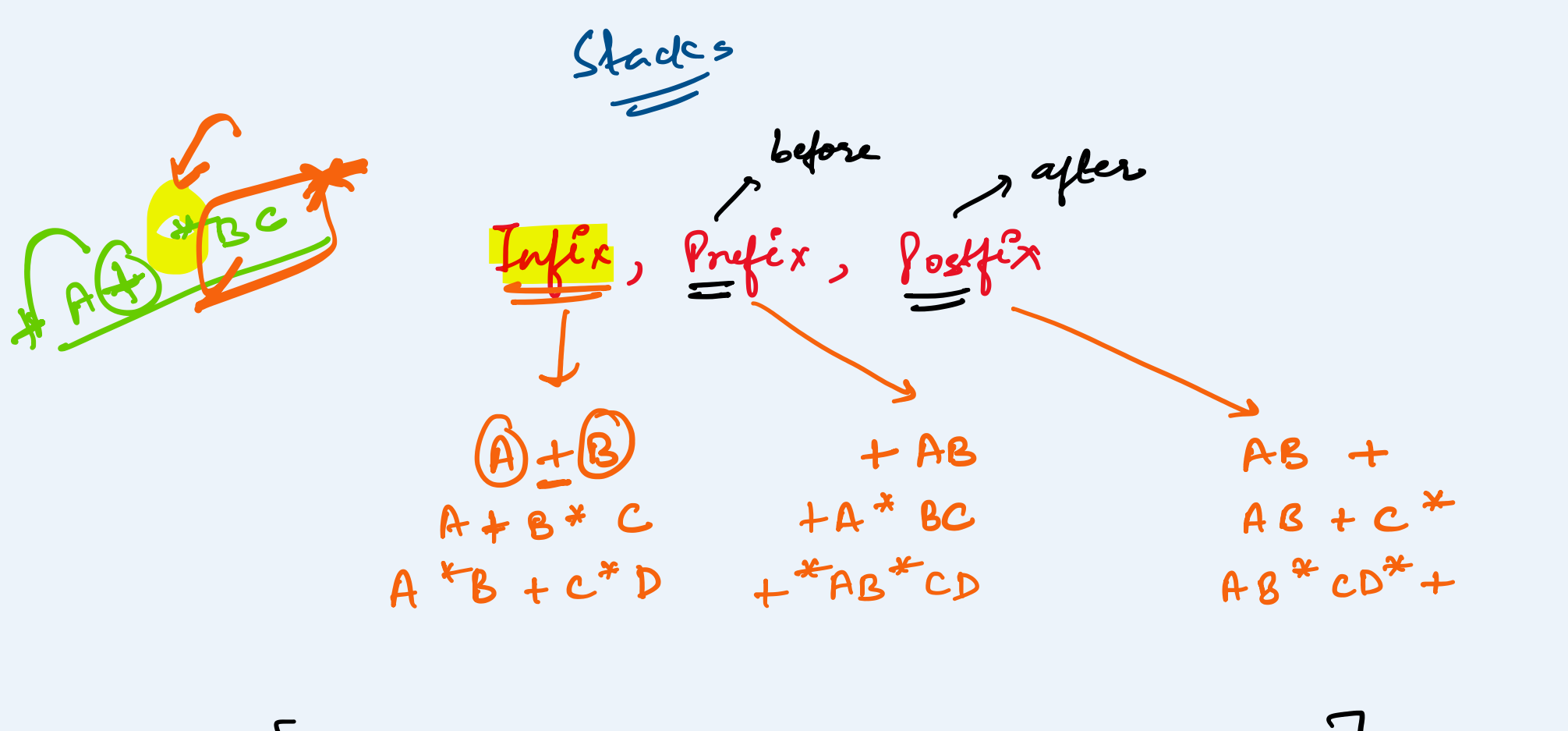
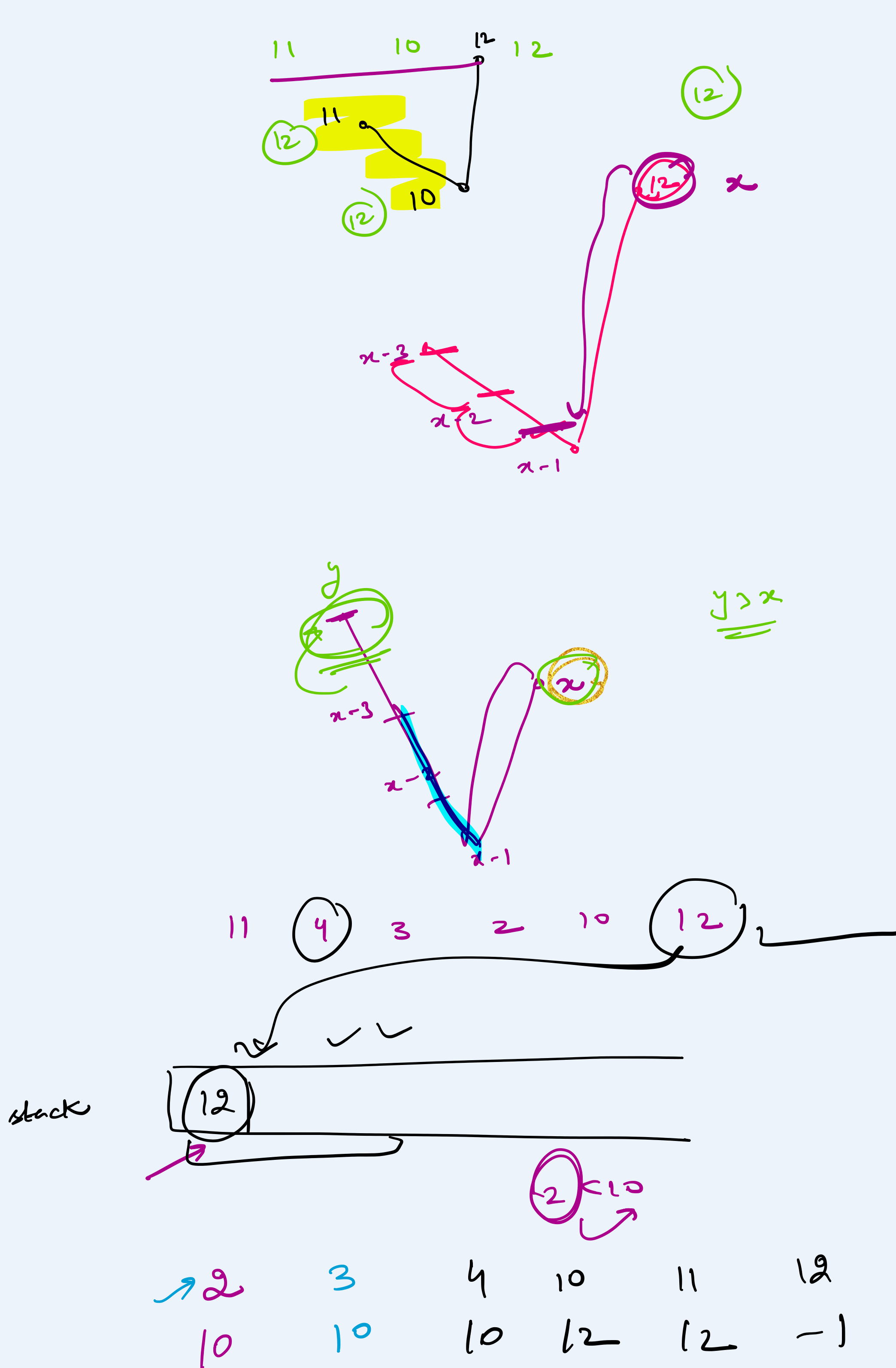
② 10 7 4 2 9 11 10 3 2
11 9 9 9 11 -1 -1 -1

Eg: 5 4 3 2 1
-1 -1 -1 -1 -1

Eg: 5 4 3 2 10
10 10 10 10 -1

Eg: 7 5 4 3 6
-1 6 6 6 -1

Eg: 11 4 3 2 10 12
12 10 10 10 12 -1



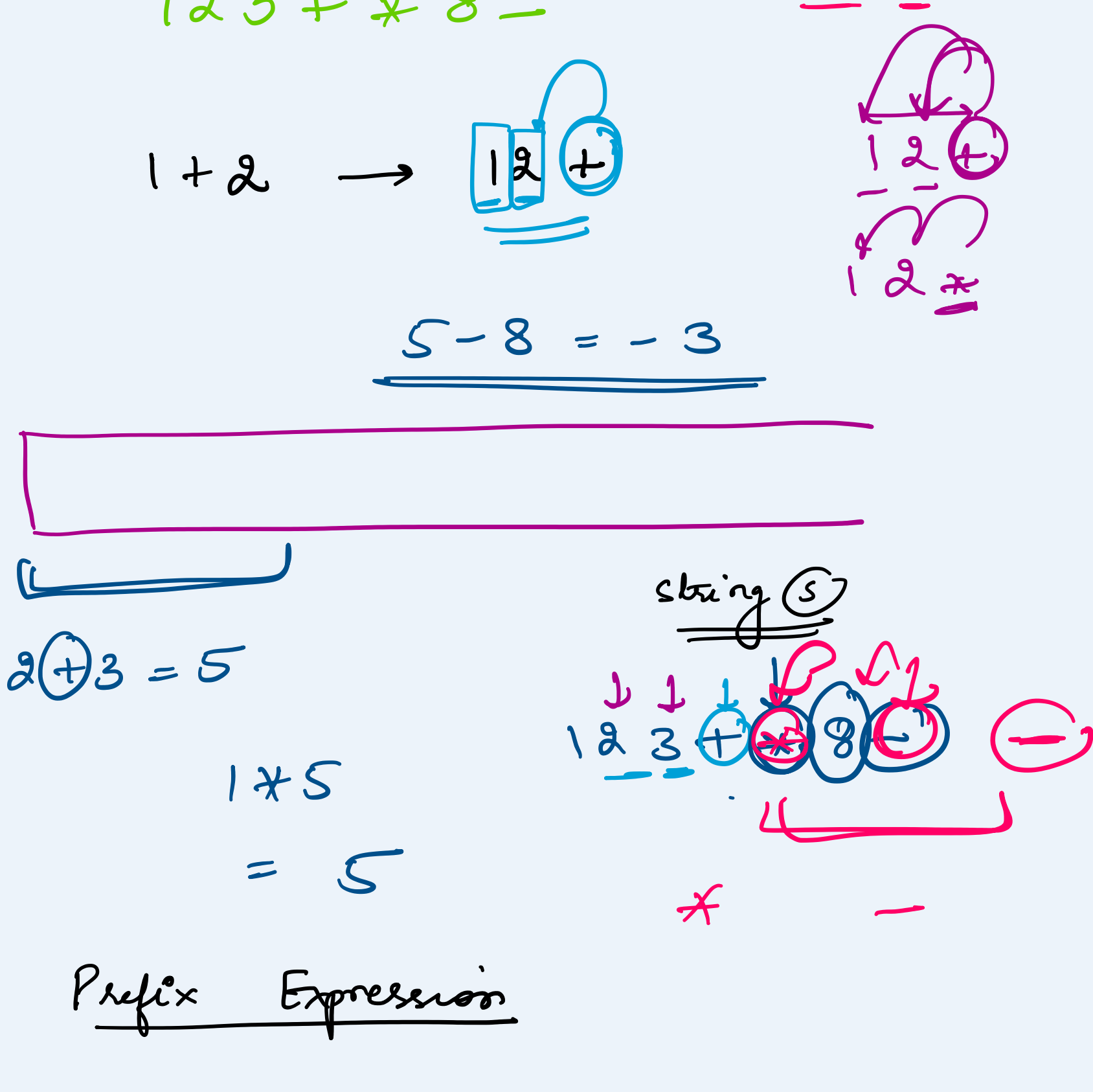
Q [Evaluation of Postfix Expression]

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

operators $\rightarrow +, -, *, /$

Input: $s = "231*+9-"$
0 $\rightarrow -4$

$s = "123+*8-"$
0 $\rightarrow -3$



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Prefix Expression
[ 8 ]

stack s;
for (i = 0; i < s.length; i++)
    if (s[i] == '+')
        s.push(s.pop() + s.pop());
    else if (s[i] == '-')
        s.push(s.pop() - s.pop());
    else if (s[i] == '*')
        s.push(s.pop() * s.pop());
    else if (s[i] == '/')
        s.push(s.pop() / s.pop());
    else
        s.push(s[i]);
return s.pop();

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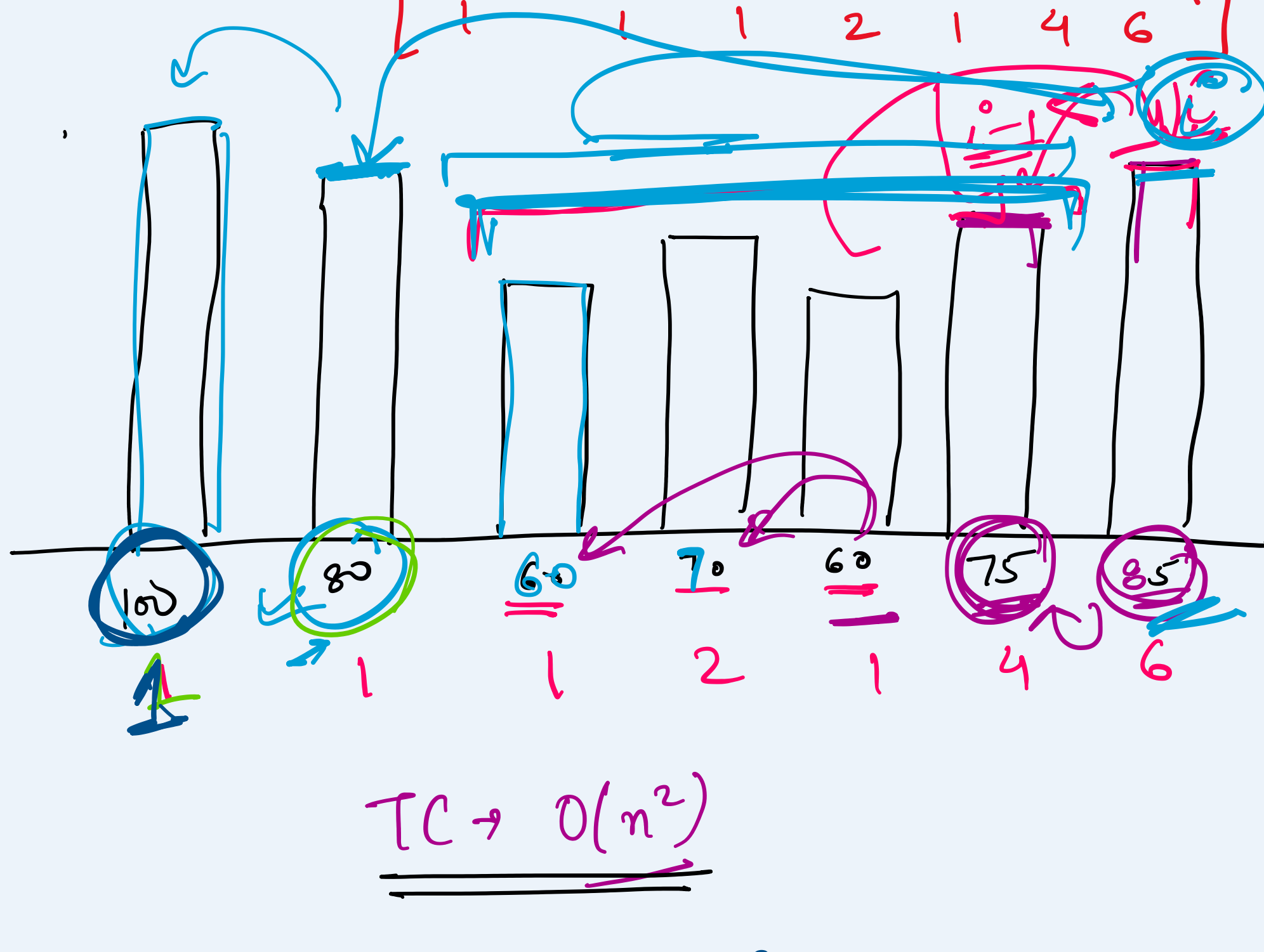
TC $\rightarrow O(n)$
SC $\rightarrow O(n)$

Q Stock span

\rightarrow Calculate the span of stock's price for given n days.

The span S_i of the stock price, defined for day i , as the max no. of consecutive days before the given day, for which the price of stock on the current day is less than equal to its price on the given day.

For eg: [100, 80, 60, 70, 60, 75, 85]



TC $\rightarrow O(n^2)$

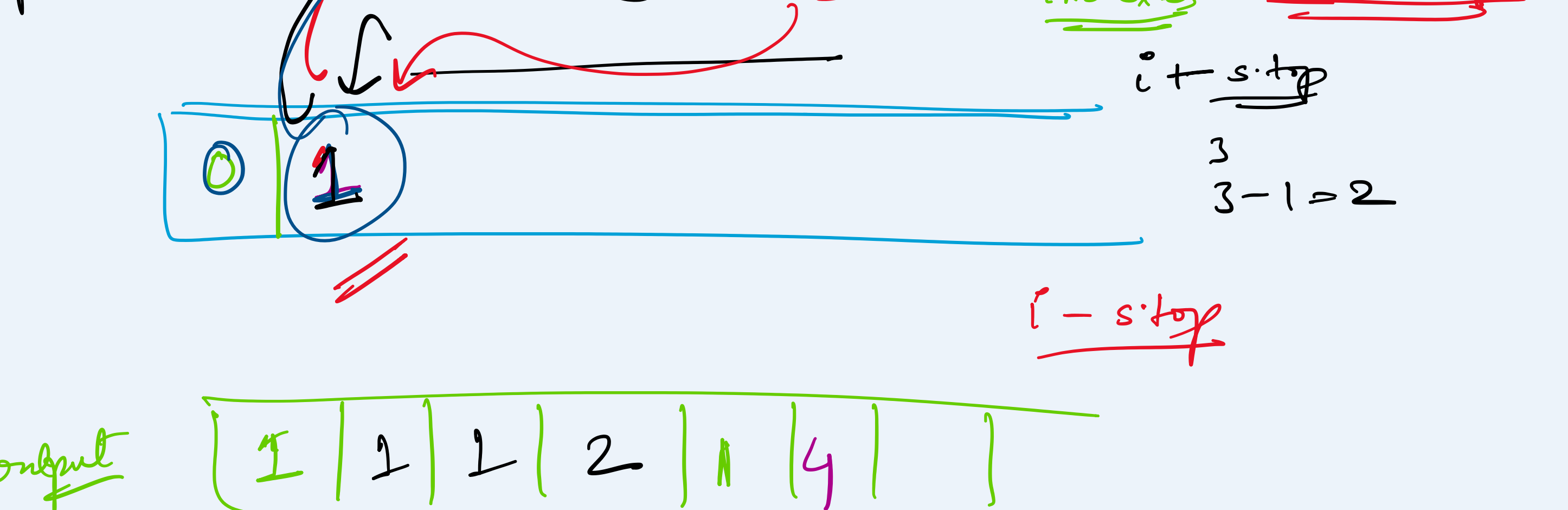
For a day i

① If $arr[i] < arr[i-1]$ span of $arr[i] = 1$

② $arr[i] > arr[i-1]$

1 + 4 + 1 = 6

2 - 1 = 1



output: [1, 1, 2, 1, 1, 4, 6]

prices[i] > prices[stack.top]

sp [stack.top]