

Postfix Expression

Infix $a + b - c * d + f$

Postfix $\Rightarrow abt \quad cd* - f +$

$a + b * c \Rightarrow abc * +$

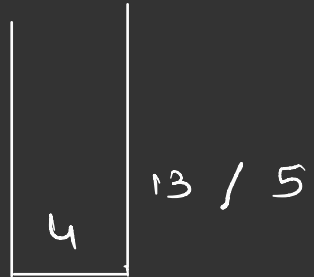
$a * b + c \Rightarrow ab * c +$

Ques Evaluate postfix

2 1 + 3 *

4 13 5 / +

↑



4 + 13 / 5

4

13

2

4

next

next Int

next Line

Ques Infix to postfix

a + b * c \Rightarrow a b c * +

d / a * b + c ^ 2
 ↑

^
/
*
+
-

b	
a	
d	

*
/

①

②

operand

\rightarrow push in ①

operator

if is Empty or top has less precedence
 \hookrightarrow push in ②

else \Rightarrow pop and convert from ② and ①

$$1 + 2 * 3 + 4 / 5$$

$$23*$$

$$45/$$

^

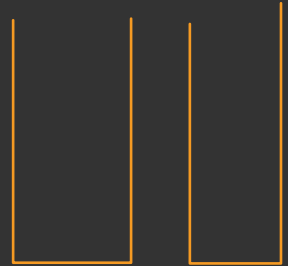
$$1\ 23*1$$

*1

+ -

$$1\ 23*+45/-$$

$$1 + 2 * 3 - 4 / 5$$



$$1\ 23*+45/-$$

^	3
*	2
/	2
+	1
-	1

Ques Next greater Element

↓

1 2 9 3 1 4 0 7

for (end → 0)

if st.peek()

while (←→)

4
7

②

↓

1	2	9	3	1	4	0	7
0	1	2	3	4	5	6	7
2	9	-1	4	4	7	7	-1

-

Ques Largest area histogram



Idx 0 1 2 3 4 5 6 7

Next
Smaller
on right

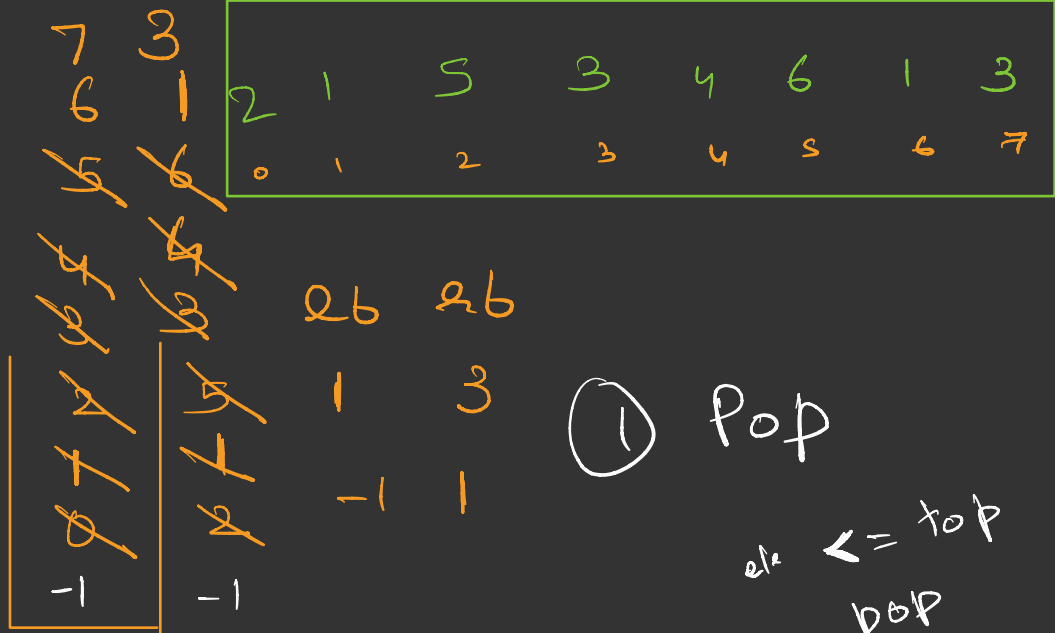
1 8 3 6 6 6 8 8
-1 -1 1 1 3 4 -1 6

Next Smaller
on left

Q x b

- 2 x 1
- 1 x 8
- 5 x 1
- 3 x 4 12
- 4 x 2
- 6 x 1
- 1 x 8
- 3 x 1

$arr[i] \times (right - left - 1)$



② Push on stack

max Area = ~~-∞~~ 2 5 8 12

Ques

4	8	10	9	7	2	3	15
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10	11	11	15	8	7	5	17
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2 3 7 8 9 9 10 15
5 7 8 10 11 11 15 17

3 ↓

2 ↓

Count

of active
meetings

~~0~~ ~~1~~ ~~2~~ ~~1~~ ~~2~~ ~~3~~ ~~2~~ 1

TC $n \log n$

1 2 9 3 2



if (arr[i] > arr[j])

$s_1.compareTo(s_2)$