

Ques Largest area rectangle in a histogram

2, 1, 5, 6, 2, 3



$\Rightarrow 10$

$m = \cancel{0}$
 $\cancel{2}$
 $\cancel{4}$
 10

Brute force $\Rightarrow O(n^2)$

$-1 \mid -1 \mid 1 \mid 2 \mid 1 \mid 4 \quad n \leq 2$

$1 \mid 6 \mid 4 \mid 4 \mid 6 \mid 6 \quad n \leq 2$

$$w = r - l - 1$$

$$A = h \times w$$

$$TC \Rightarrow O(n)$$

$$SC \Rightarrow O(n)$$

2, 1, 5, 6, 2, 3



2 6 10 6 8 3

$$(6 - (-1) - 1) \times 1$$

10

$\Rightarrow 10$

5
3
1

Ques Max in a widow of size k

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

k=3

7 5

4 6

$i - k >= 10x$

$4 - 3 >=$

$1 >=$

9 9 7 7 7

