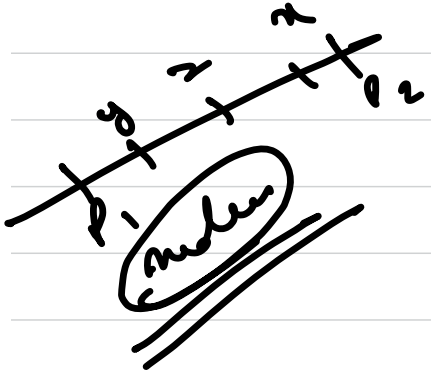
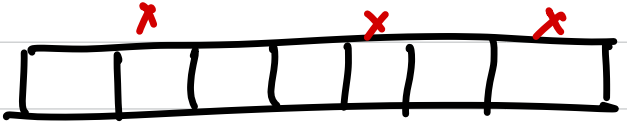
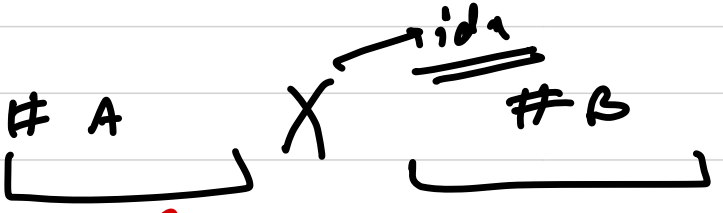




K=3



1

A > B

(X-1)

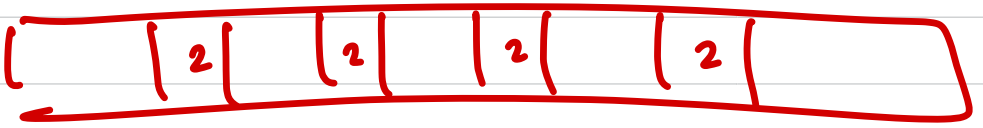
C → last

B - A < 0

2

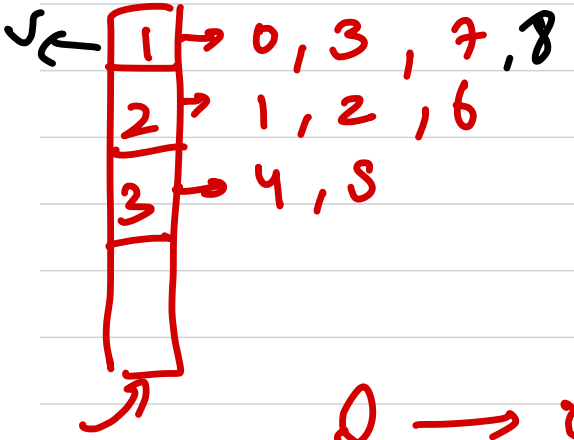
B > A

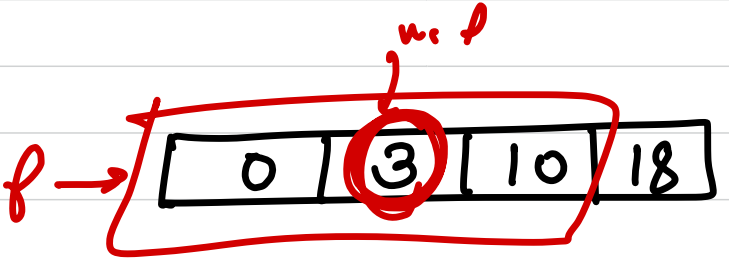
$k = 3$



1 , 2 , 2 , 1 , 3 , 3 , 2 , 1 , 1

S = | 1 | 2 | 3 |





(mid - l) v[mid] —

l ⟶ r

p[r] - p[l-1]

(mid - l)(mid - l + 1) / 2

1 , , 1 , , , 1 , , 1 , , 1 , , 1 ,

0 1 2 3 4 5 6 7 8 9

k = 4

[0 , 2 ; 5 , 7 , 9]

[0 | 2 | 7 | 14 | 23]

l = 0   r = 9

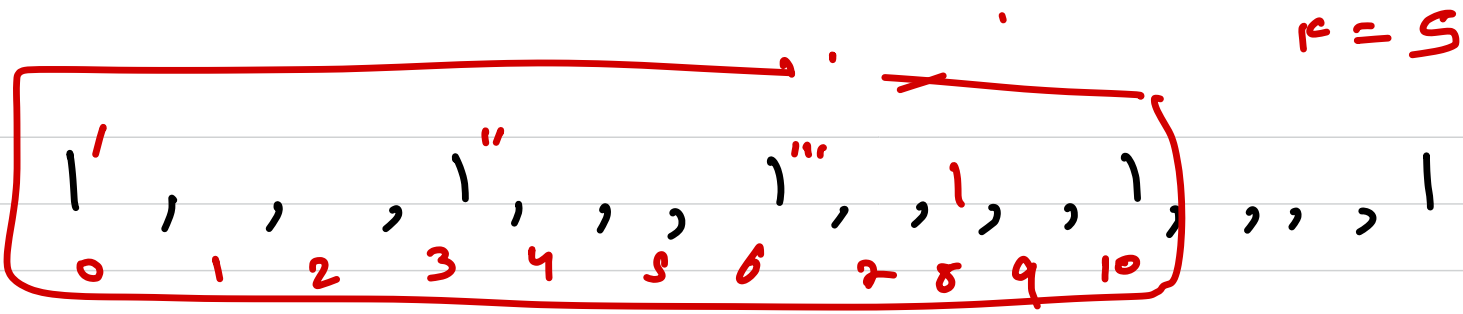
m = 9

(4 − 0) × (3)

7

$(mid - l) \times 5$

$2 \times 5 = 10 - 7 = 8 - 3 = 5$



v → 1 → 0, 3, 6, 8, 10 → 0, 3, 9, 17, 27

↳ prefixsum

mid = $\frac{0+4}{2}$ → 2

(mid - l) x v[mid]

↓ ↓

total elem x distinct
on left index

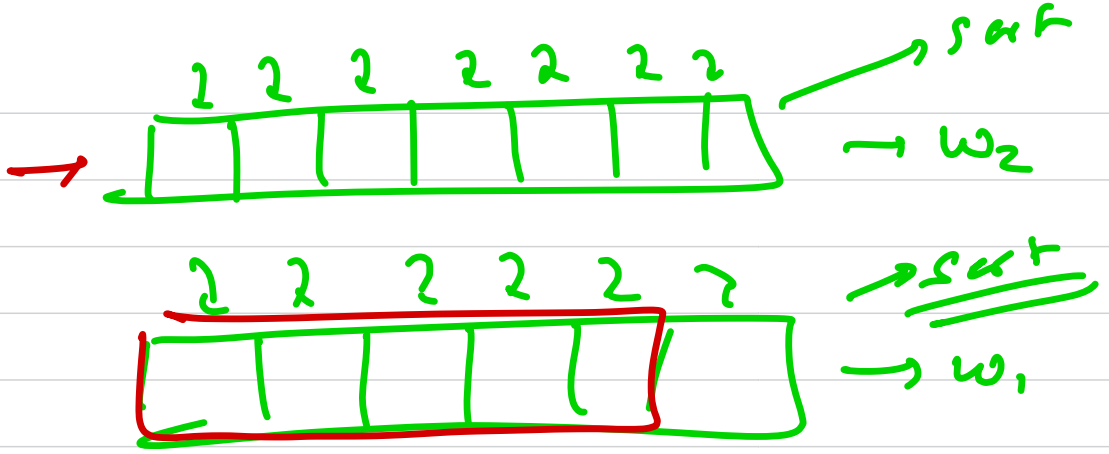
2 x 6 → 12 - 3 ⇒ 9 - 5 = 6

- pref[mid-1] - pref[l-1]

mid-1 + mid-2 ... mid-l

(mid-l) x (mid-l+1)/2

$$\rightarrow \quad (m:d-l) \times v[m:d] - (p[m:d-1] - p[l-1]) - \frac{(m:d-l)(m:d-l+1)}{2}$$



$w \rightarrow even \rightarrow w_2 \rightarrow (1)$

$w_1 \rightarrow (1)\ (1)$

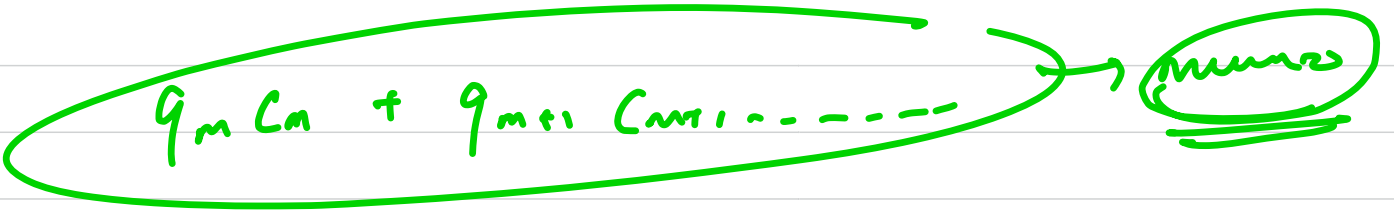
$w \rightarrow odd \rightarrow$ odd

$w \rightarrow even \rightarrow$ even

$\boxed{10} \rightarrow w_2$

$\hookrightarrow \boxed{12} \rightarrow w_1$

$n^{th} \rightarrow q_n$ litre



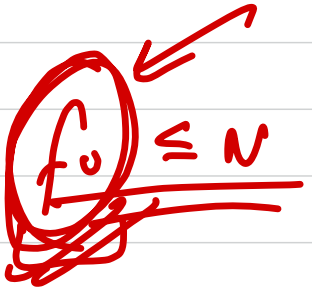
$(n-1)^{th}$ Car $\longrightarrow$ x litre

$x \geq n$

n^{th} Car $\longrightarrow$ $\min(f_n, N-x)$

Sort on the bases of cost.

$a_i \rightarrow (c_i, f_i)$

$a_0 \rightarrow$ 

c_0 is best

$c_0 \times f_0$

$f_1 \leq n$

$f_2 > n$

$c_2 \times (n - f_2)$