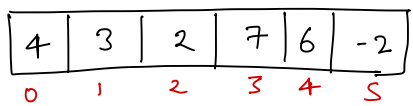
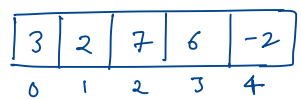
Prefix Sum

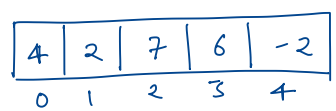
(Introduction to Problem Solving I)

Rough Work

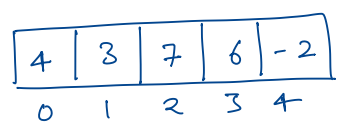
arr → 

remove index 0 → 

→ Σodd = 8
→ Σeven = 8 ✓

remove index 1 → 

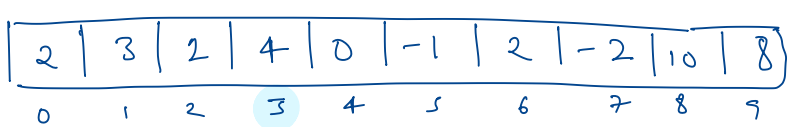
→ Σodd = 8
→ Σeven = 9 ✗

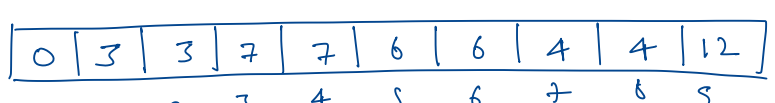
remove index 2 → 

→ Σodd = 9
→ Σeven = 9 ✓

. . .

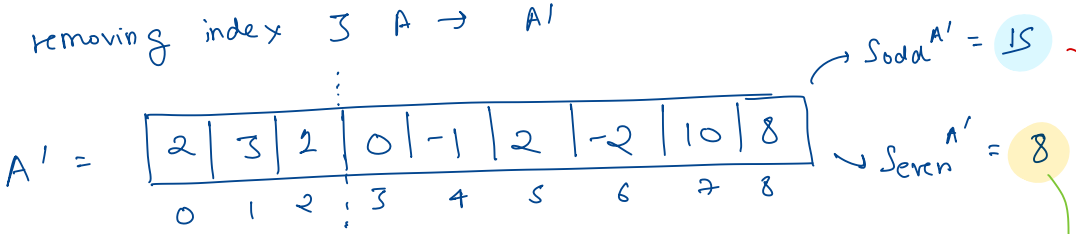
and so on

A = 

$pOdd_A$ = 

$pEven_A$ = 

on removing index 3 A → A'



$S_{odd}^{A'} = S_o[0-2]_A + S_e[4-9]_A$

$= pOdd_A[2] + [pEven_A[9] - pEven_A[3]]$

$= 3 + [15 - 3] = 3 + 12 = 15$

$S_{even}^{A'} = S_e[0-2]_A + S_o[4-9]_A$

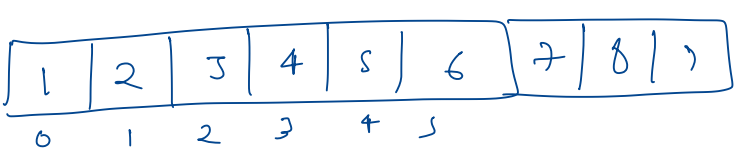
$= pEven_A[2] + pOdd_A[9] - pOdd_A[3]$

$= 3 + 12 - 7 = 8$

⇒ for K^{th} index, where $|A| = N$ & $K > 0$

$S_{even}^{A'} = pSum^A_{even}[K-1] + pSum^A_{odd}[N-1] + pSum^A_{odd}[K]$

but what for $K = 0$



let's remove 0^{th} index

$A' =$

2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7

$S_O = 3 + 5 + 7 + 9$ → Seven in A except A[0]

$S_e = 2 + 4 + 6 + 8$ → Sodd in A

which translates to the equation

$S'_{even} == S'_{odd}$ for $i = 0$?

⇒ if (pSumO[N-1] == pSumE[N-1] - A[0])