

$$\downarrow$$

$$[-10, -5, -6, -7] \quad \text{(-5)}$$

$$\underline{\text{result}} = \underline{0}$$

$$\downarrow \quad \downarrow$$

$$[10, 7, -2, -3, 5, 6]$$

$$5+6+10+7 = \underline{28}$$

\Rightarrow case-1 : Considering the array linear : $S1$

\Rightarrow case-2 : Circular case

$$\text{minSum} = -5$$

$$\text{Overall Sum} = 23$$

$$23 - (-5) = \underline{28}$$

$$[\text{OverallSum} - \text{minSum} : S2]$$

$$\Rightarrow \underline{\max(S1, S2)}$$

$$[-10, -7, 2, 3, -5, -6] \Rightarrow \text{maxSum} = \underline{5}$$

$$\rightarrow \text{minSum} = -\text{maxSum} = \underline{-5}$$

$$[2, 3, 5, 6] = \underline{16}$$

$$[1, -2, 3, -2] \quad S1 = 3$$

$$\underline{-2} \quad S2 = 2$$

$$[-1, 2, -3, 2] \quad 0 - (-)$$

$$[a_0, a_1, a_2, a_3, a_n, \dots, a_{n-1}]$$

$$\text{prefix: } [a_0, \dots, a_i]$$

$$[a_0] \quad [a_0, a_1] \quad [a_0, a_1, a_2] \quad \checkmark$$

$$[a_1], [a_0, a_2] \quad \times$$

$$\text{sufffix: } [a_i, \dots, a_{n-1}]$$

$$[a_{n-1}] \quad [a_{n-2}, a_{n-1}] \quad \checkmark$$

$$[a_0], [a_{n-3}, a_{n-1}] \quad \times$$

\downarrow

$$\text{arr: } [1, 2, 3, 4, 7, 10]$$

$$\text{pref: } [1, 3, 6, 10, 17, 27]$$

$$\text{suff: } [27, 26, 24, 21, 17, 10]$$

$$\left[\begin{array}{l} \text{pref}[i] = \text{pref}[i-1] + \text{arr}[i] \\ \text{pref}[0] = \text{arr}[0] \end{array} \right] \quad i > 0$$

$$\left[\begin{array}{l} \text{suff}[i] = \text{arr}[i] + \text{suff}[i+1] \\ \text{suff}[n-1] = \text{arr}[n-1] \end{array} \right] \quad i < n-1$$

$$L[] = [2, 1, 3]$$

$$R[] = [5, 3, 9]$$

$$[2, 5]: 2, 3, 4, 5$$

$$[1, 4]: 1, 2, 3, 4$$

$$[3, 9]: 3, 4, 5, 6, 7, 8, 9$$

$$\text{o/p} = 3$$

$$\text{BF: } \text{TC} = O(n \times \text{max})$$

$$\text{AS} = O(\text{max})$$

	freq
1:	1
2:	2
3:	3
4:	3
5:	2
6:	1
7:	1
8:	1
9:	1

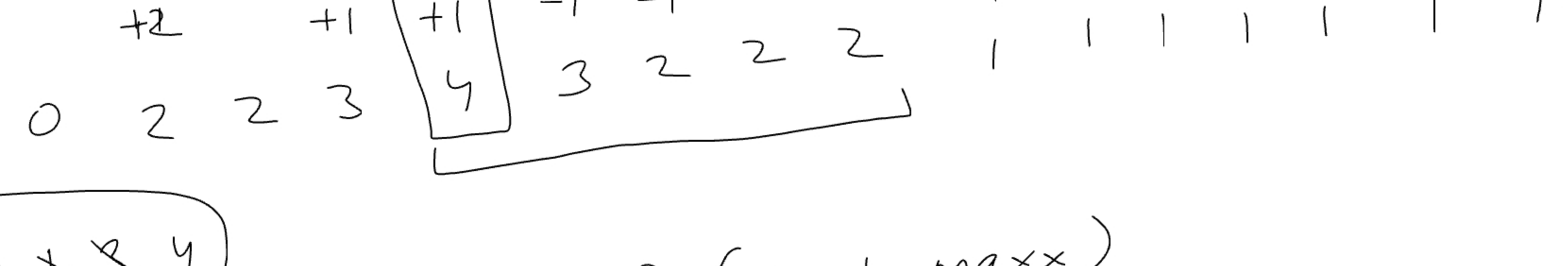
(~~any~~ range).
max value in any range.

$$\left[\begin{array}{l} 10^6 \times 10^6 = 10^{12} \\ 10^8 \rightarrow \sim 1 \text{ sec.} \end{array} \right] \quad 10^9 \text{ sec.}$$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow$$

$$L[]: [1, 4, 3, 1]$$

$$R[]: [15, 8, 5, 4]$$



$$\text{MFI} = 4 \times 3 \times 4$$

$$\text{TC} = O(n + \text{max})$$

$$\% 7$$

$$\downarrow \quad \downarrow \quad \downarrow$$

$$[7, 14, 21]$$

$$[]$$

$$\text{arr: } [1, 2, 3, 4]$$

$$\text{ans: } [24, 12, 8, 6]$$

$$[1, 2, 3, 4]$$

$$\text{BF: } \text{TC} = O(n^2)$$

$$\text{AS} = O(1)$$

$$\text{arr: } [0, 1, 0]$$

$$\text{ans: } [0, 0, 0]$$

$$\text{arr: } [1, 2, 0]$$

$$\text{ans: } [0, 0, 2]$$

$$i: 0 \rightarrow n-1$$

$$j: 0 \rightarrow n-1$$

$$\text{shifting}$$

$$\downarrow \quad \downarrow$$

$$[1, 2, 3, 4, 2, 1, 3]$$

$$\text{ans}[0] =$$

$$\left[\text{ans}[i] = \text{prefMod}[i-1] \times \text{suffMod}[i+1] \right] \quad i: [1 \dots n-2]$$

$$\text{TC: } O(n+n+n) = O(n)$$

$$\text{AS: } O(n+n) = O(n)$$

$$[1, 2, 3], \text{ target} = 6$$

$$\text{False}$$

$$[1, 2, 3, 3], \text{ target} = 6$$

$$\text{True}$$

$$[1, 1, 2] \rightarrow [1, 2, -]$$

$$[1, 2, 2, 3, 3] \rightarrow [1, 2, 3, -, -, -]$$

$$3$$