

Day Runi

	0	1	2	3	4	5
	3	3	1	2	4	5
pf sum	3	6	7	9	13	18
curr sum	3	6	0	2	6	4
target sum	6	2	3	5	2	0
(curr sum - target sum) % p						

11 p=7 \Rightarrow sum=24

$$3+7-4=6, 6+7-4=9 \Rightarrow 2, 0+7-4=3$$

$$2+7-4, 6+7-4=9 \Rightarrow 2, 4+7-4=0$$

hash r

$$0 \rightarrow 2, 3 \rightarrow 0, 6 \rightarrow 4, 0 \rightarrow 2, 2 \rightarrow 3, 4 \rightarrow 5$$

Subarray suitable for del's by above algo

$$1. (0, 2] = [1, 2]$$



curr sum

target sum

Subarray computed till here so far

* Note the sum part $[3, 5]$ will contribute to $[0, 0]$ as $(\text{sum}[0, 0] + \text{sum}[3, 5]) \% p = 0$

as $\text{sum}[1, 2] \% p = \text{sum}$

* If not then sum value shd be diff

* Due of the prop of modulo op:-

$$\begin{array}{cccccc}
 (arr[0] + [1] + [2] + [3] + [4] + [5]) \% p \\
 \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\
 p_0 \quad p_1 \quad p_2 \quad p_3 \quad p_4 \quad p_5
 \end{array}$$

Now $(p_1 + p_2) \% p = rem$

& $(p_0 + p_1 + \dots + p_5) \% p = rem$

$\Rightarrow (p_0 + p_3 + p_4 + p_5) \% p + \underbrace{(p_1 + p_2) \% p}_{rem} = rem$

$\Rightarrow (p_0 + p_3 + p_4 + p_5) \% p = 0$

HP