

Array-11

01 December 2025

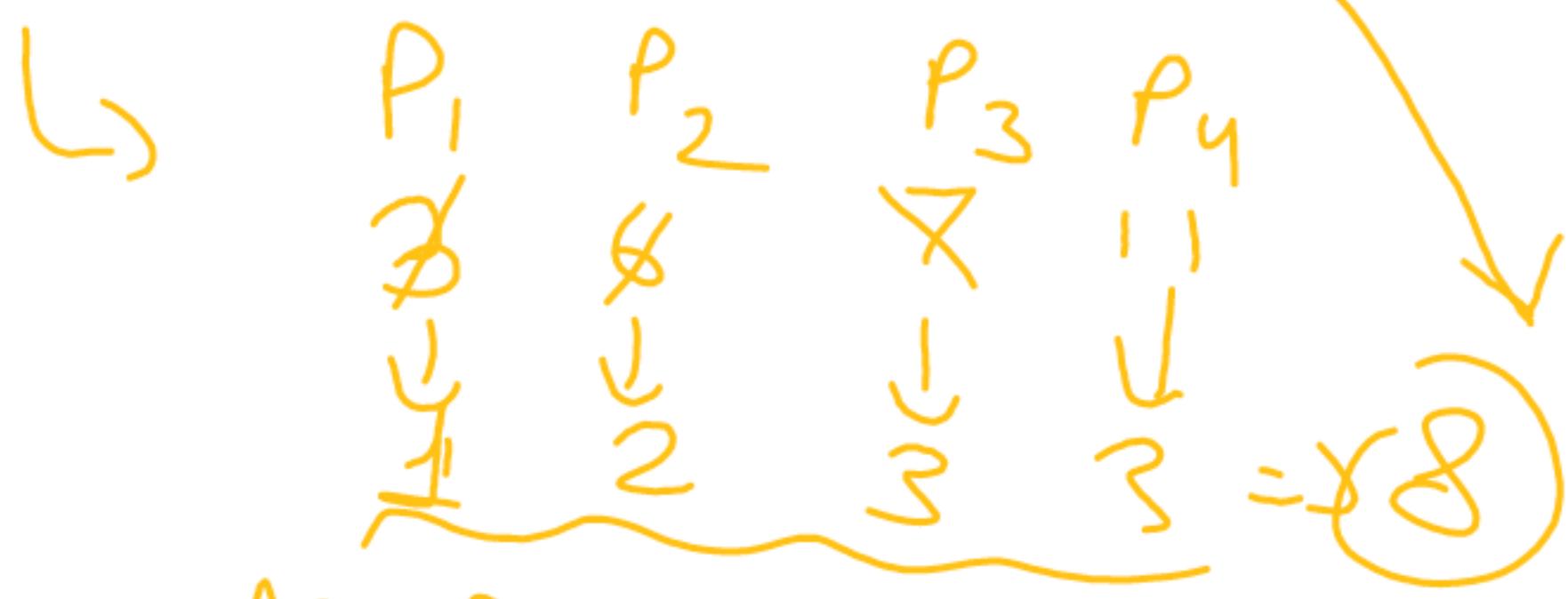
14:27

Koko eating bananas

Piles $\Rightarrow \{3, 6, 7, 11\}$

hours $\Rightarrow 8$

Output $\Rightarrow 4$



If it ate 3 per hour then

$$1 \quad 2 \quad 3 \quad 4 = 10 \Rightarrow 8 \text{ Not Possible}$$

Now find the range for BS

$$l = 1 \quad (\text{Min}) \quad \gamma = 11 \quad (\text{Total Sum})$$

(Worst case)

Cond₂
 $l < \gamma$

$$l = 1 \quad m = 6 \quad \gamma = 11$$

$$mid = l + (\gamma - 1)/2 = 6$$

If $b/\text{hour} = 6 \Rightarrow [3 | 6 | 7 | 11]$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow = 6 \Rightarrow \text{Good but we will try } \leq 6$$

Now $\gamma = 6$
 $l = 1$

$$m = l + (\gamma - 1)/2 \Rightarrow 3$$

If $b/\text{hour} = 3 \Rightarrow [3 | 6 | 7 | 11]$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow = 10 \Rightarrow \times \Rightarrow \text{we will go right}$$

So $l = 4, \gamma = 6$

$$m = 4 + \frac{\gamma - 1}{2} = 5$$

If $b/\text{hours} = 5 \Rightarrow [3 | 6 | 7 | 11]$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow = 8 \Rightarrow \checkmark \text{ will try } \leq 5$$

$l = 4, \gamma = 5$

$$mid = 4 + \frac{1}{2} \Rightarrow 4$$

If $b/\text{hours} = 4 \Rightarrow [3 | 6 | 7 | 11]$

$$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow = 8 \Rightarrow \checkmark \text{ note } \leq 4$$

Now, $l = 2, \gamma = 2$

$$\frac{l = \gamma}{l = \gamma} \Rightarrow \text{loop ends}$$

Return $\boxed{4}$