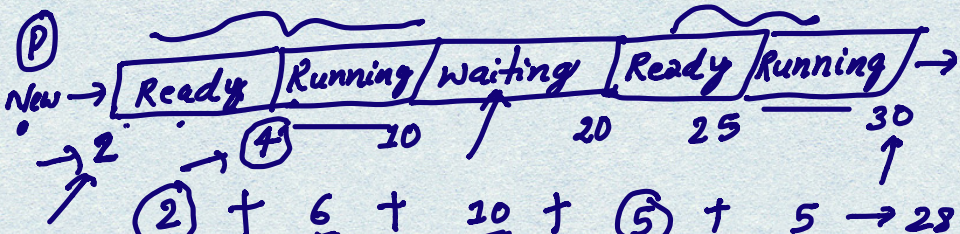
CPU Scheduling Criteria in operating System

1. CPU Utilization → How much time is CPU Busy
2. Throughput → Number of processes completed per unit time
3. Turnaround Time → Completion Time - Arrival Time
4. Waiting Time → Total time spent in Ready Queue
5. Response Time → Start Time - Arrival Time



2 + 6 + 10 + 5 + 5 → 28

30 - 2 = 28 → TAT

2 + 5 = 7 → WT

Ready → Running

2 → RT

4 - 2 = 2

$\frac{11}{30} \times 100$

$\frac{1}{28}$ proc/unit time

Turnaround Time = Completion Time − Arrival Time

Turnaround Time = Total Burst Time + Total waiting Time

= BT + WT (Ready + I/O)

CPU

Assumption, I/O → 0

$= BT + WT$

Gantt chart

Burst

$$TAT = BT + WT$$

$$WT = TAT - BT$$

RT = start Time − Arrival Time

TAT = CPU Burst Time + I/O Burst Time + Time spent in Ready Queue

TAT = CPU Burst Time + I/O Burst Time + WT

WT = TAT − (CPU Burst Time + I/O Burst Time)

Total burst Time

= TAT − Total Burst Time

$TAT = 28$

$WT = 28 - 21 = 7$

CPU util. = $\frac{\text{CPU Run}}{\text{Total}}$

Throughput = $\frac{n}{\text{Total}}$

$$\begin{cases} TAT = CT - AT \\ WT = TAT - BT \quad (BT = \text{I/O Burst} + \text{CPU Burst}) \\ RT = ST - AT \end{cases}$$