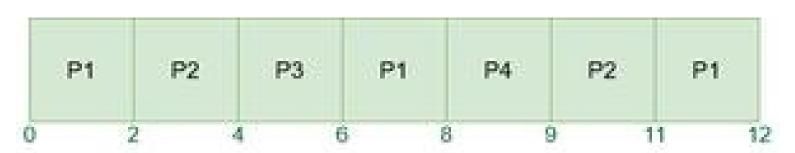# Example 1 (Different Arrival Time)

Example-1: Consider the following table of arrival time and burst time for four processes P1, P2, P3, and P4 and given Time Quantum = 2

Process	Burst Time	Arrival Time
P1	5 ms	0 ms
P2	4 ms	1 ms
P3	2 ms	2 ms
P4	1 ms	4 ms

Processes	AT	BT	CT	TAT	WT
P1	0	5	12	12-0 = 12	12-5 = 7
P2	1	4	11	11-1 = 10	10-4 = 6
P3	2	2	6	6-2 = 4	4-2 = 2
P4	4	1	9	9-4 = 5	5-1 = 4

Now,

- *Average Turn around time = (12 + 10 + 4 + 5)/4 = 31/4 = 7.7*
- *Average waiting time = (7 + 6 + 2 + 4)/4 = 19/4 = 4.7*

P1	P2	P3	P1	P4	P2	P1

0   2   4   6   8   9   11   12

Example 2 (Same Arrival Time)

Example 2: Consider the following table of arrival time and burst time for three processes P1, P2 and P3 and given **Time Quantum = 2**

Process	Burst Time	Arrival Time
P1	10 ms	0 ms
P2	5 ms	0 ms
P3	8 ms	0 ms

Now, lets calculate average <u>waiting time and turn around</u> time:

Processes	AT	BT	CT	TAT	WT
P1	0	10	23	23-0 = 23	23-10 = 13
P2	0	5	15	15-0 = 15	15-5 = 10
P3	0	8	21	21-0 = 21	21-8 = 13

Total Turn Around Time = 59 ms

*So, **Average Turn Around Time** = 59/3 = 19.667 ms*

And, Total Waiting Time = 36 ms

*So, **Average Waiting Time** = 36/3 = 12.00 ms*

P1	P2	P3	P1	P2	P3	P1	P2	P3	P1	P3	P1

0   2   4   6   8   10   12   14   15   17   19   21   23