What (if any) relation holds between the following pairs of algorithm sets?

Priority and Shortest Job First:
In SJF, the priority of a process is determined by its burst time—processes with shorter burst times are given higher priority.

Multilevel Feedback Queues and First Come First Serve:
Multilevel Feedback Queues can use FCFS within each queue level. Processes move between queues based on their execution history, but within each queue, jobs are executed in FCFS order.

Priority and First Come First Serve:
In FCFS, the priority is implicitly based on arrival time—processes that arrive earlier are given priority.

Round Robin and Shortest Job First:
Round Robin and SJF differ fundamentally in how they prioritize jobs. Round Robin cycles through processes using a fixed time quantum, regardless of burst time, while SJF prioritizes processes with the shortest burst time.

Using a Gant chart, given the following jobs and their arrival time, how would each of the jobs be scheduled for the algorithms below (also list the average wait time)

Job Number	Burst Time	Arrival Time	Priority
1	3	1	3
2	2	2	2
3	5	3	4
4	1	4	5
5	8	5	1

Algorithms
Round Robin with Time Quantum 2

| P1 2 | P2 2 | P3 2 | P4 1 | P5 2 | P1 1 | P3 2 | P5 2 | P3 1 | P5 4 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

Wait Time

P1: 7

P2: 1

P3: 8

P4: 3

P5: 7

Avg: 5.2

Round Robin with Time Quantum 4

| P1 3 | P2 2 | P3 4 | P4 1 | P5 4 | P3 1 | P5 4 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

Wait Time

P1: 0

P2: 2

P3: 8

P4: 6

P5: 7

Avg: 5.2

Priority Scheduling

| P1 1 | P2 2 | P3 1 | P5 8 | P1 2 | P3 4 | P4 1 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |

Wait Time

P1: 11
P2: 0
P3: 11
P4: 15
P5: 0
Avg: 7.4

Shortest Remaining Time First (Same as Preemptive)

P1 and P2 had the same time remaining, so I kept P1 running

↓

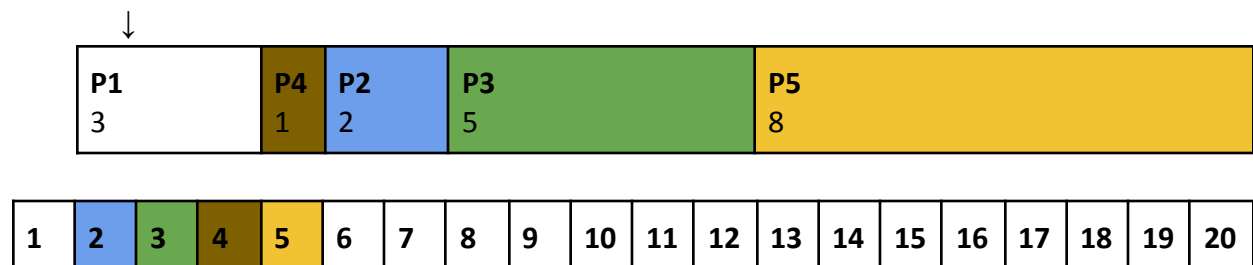| P1 3	P4 1	P2 2	P3 5	P5 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
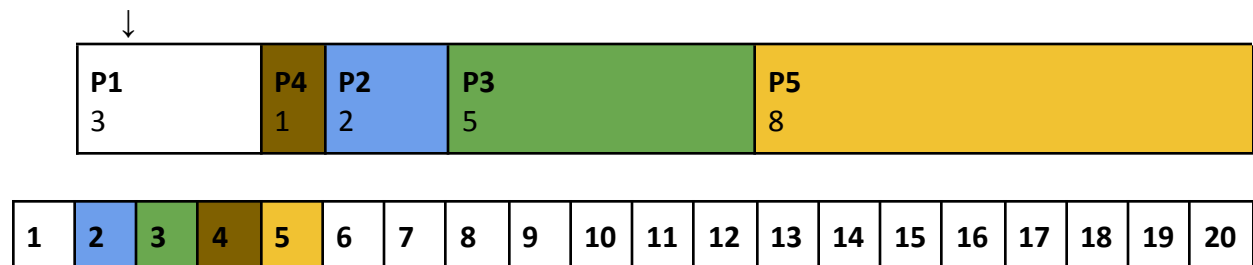
Wait Time
P1: 0
P2: 3
P3: 4
P4: 0
P5: 7
Avg: 2.8

Shortest Job First (with preemption)

P1 and P2 had the same time remaining, so I kept P1 running

↓

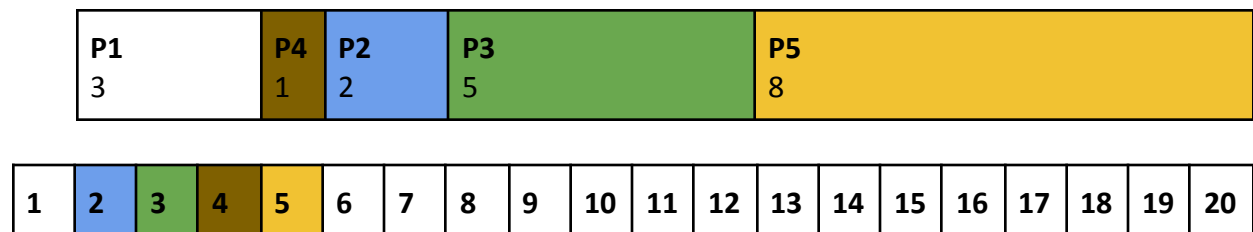| P1 3	P4 1	P2 2	P3 5	P5 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Wait Time
P1: 0
P2: 3

P3: 4
P4: 0
P5: 7
Avg: 2.8

Shortest Job First (without preemption)

P1 3	P4 1	P2 2	P3 5	P5 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Wait Time
P1: 0
P2: 3
P3: 4
P4: 0
P5: 7
Avg: 2.8

First Come First Serve Scheduling

P1 3	P2 2	P3 5	P4 1	P5 8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
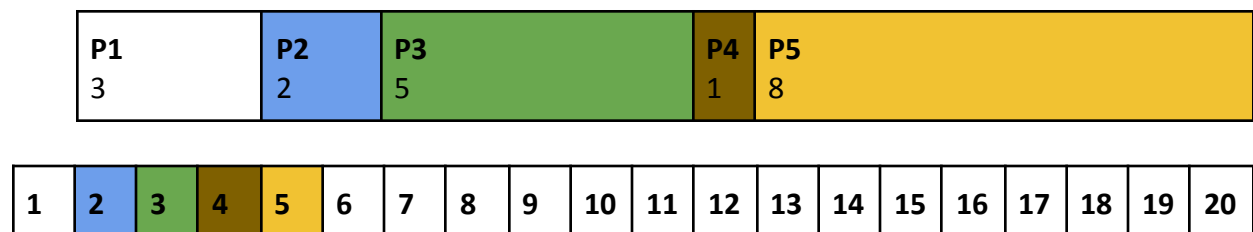
Wait Time
P1: 0
P2: 2
P3: 3
P4: 7
P5: 7
Avg: 3.8