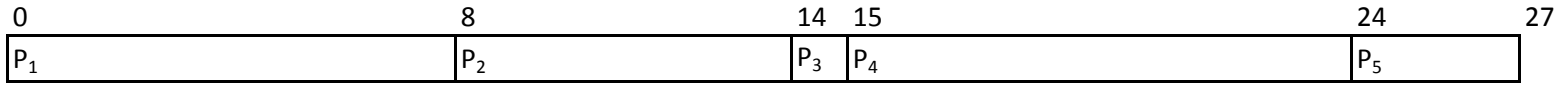
CPU Scheduling Exercises
Problem 1
Solutions

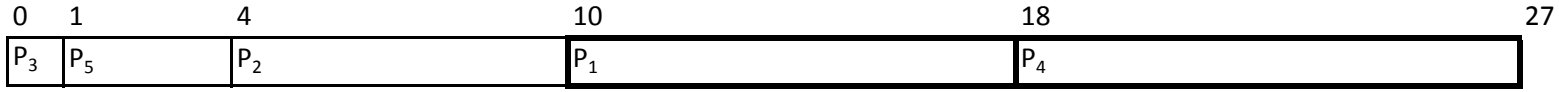
Process	Burst	Priority
P_1	8	4
P_2	6	1
P_3	1	2
P_4	9	2
P_5	3	3

First Come First Served



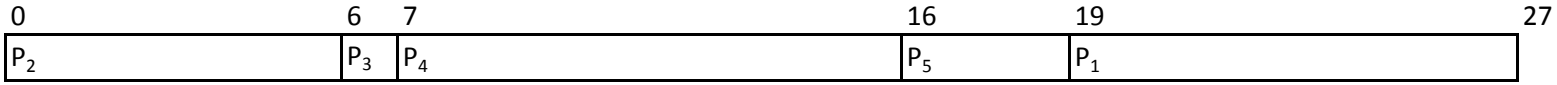
Avg. Wait = 0+8+14+15+24 = 61/5 = 12.2ms Avg. TAT = 8+14+15+24+27 = 17.6ms

Shortest Job First



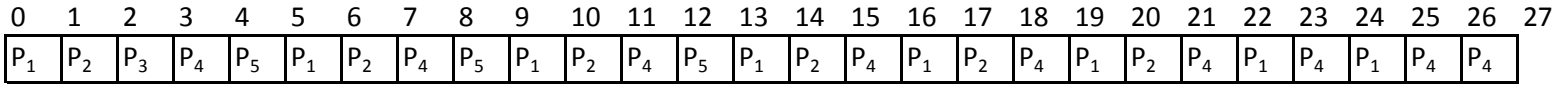
Avg. Wait = 0+1+4+10+18 = 33/5 = 6.6ms Avg. TAT = 1+4+10+18+27 = 60/5 = 12ms

Non-Preemptive Priority



Avg. Wait Time = 0+6+7+16+19 = 48/5 = 9.6ms Avg TAT = 6+7+16+19+27 = 75/5 = 15ms

Round Robin (1ms Quantum)



Wait Time P_1 = 0+5-1+9-6+13-10+16-14+19-17+22-20+24-23 = 0+4+3+3+2+2+2+1 = 17
Wait Time P2 = 1+6-2+10-7+14-11+17-15+20-18 = 1+4+3+3+2+2 = 15
Wait Time P3 = 2
Wait Time P4 = 3+7-4+11-8+15-12+18-16+21-19+23-22+25-24 = 3+3+3+3+2+2+1+1 = 18
Wait Time P5 = 4+8-5+12-9 = 4+3+3 = 10
Avg Wait Time = 62/5 = 12.4ms

Avg TAT =25+21+3+27+13 = 89/5 = 17.8ms

Algorithm	**Avg Wait**	**Avg TAT**
FCFS	12.2	17.6
SJF	6.6	12
NonP Priority	9.6	15
RR	12.4	17.8

SJF has shortest wait and shortest TAT