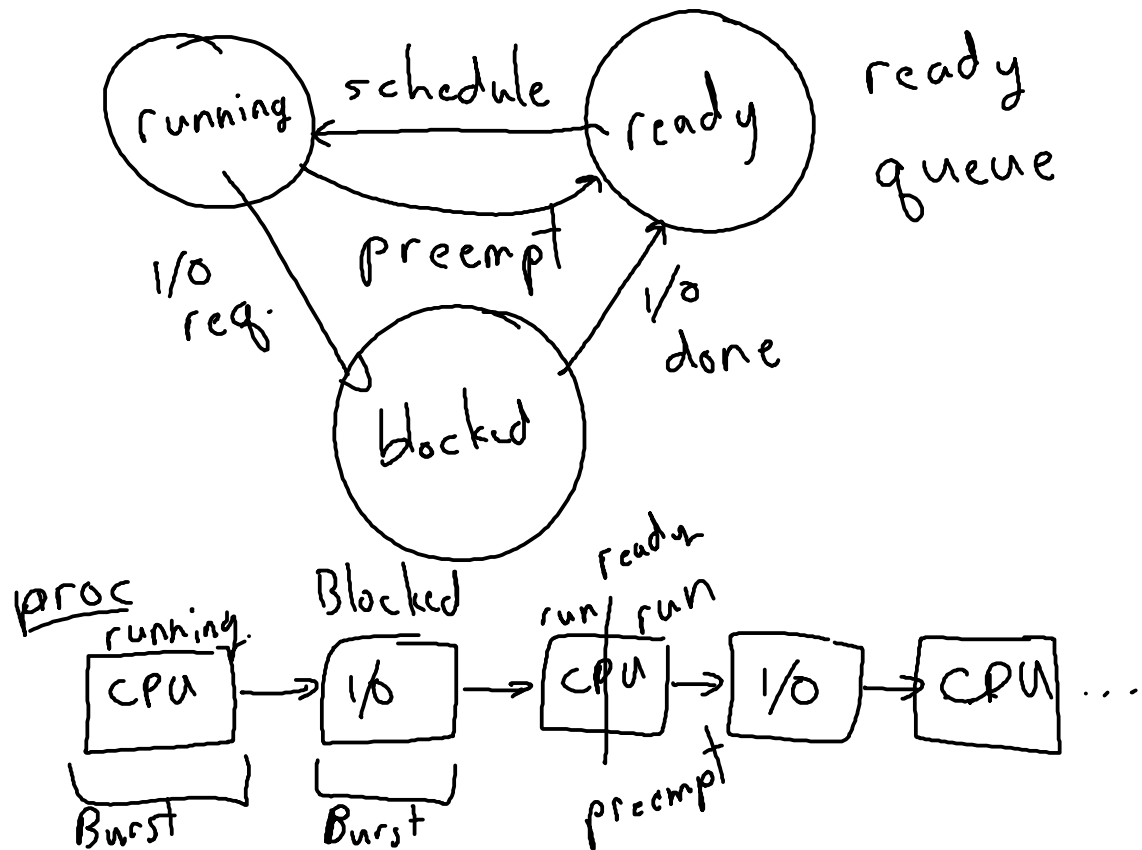




Scheduling Algorithms

Metrics
general:
 CPU utilization
 $\frac{\text{run time}}{\text{total time}}$
 Throughput:
 $\frac{\text{processes}}{\text{time}}$

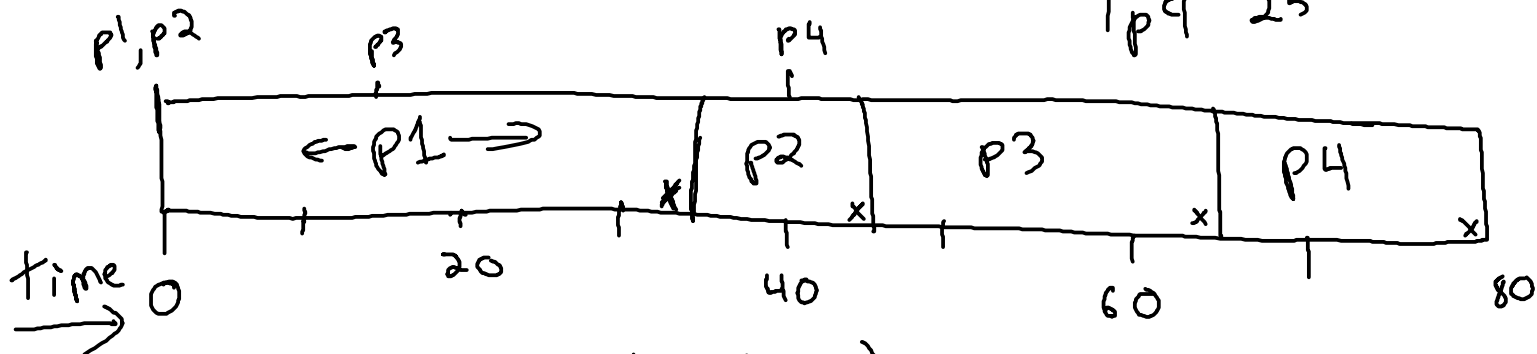
process metrics:
 turnaround:
 completion - arrival
 wait time:
 time in ready state
 response time:
 time of 1st run - arrival

process	CPU Burst	Arrival	Priority
P1	35	0	Medium - 2
P2	10	0	Low - 3
P3	20	15	High - 1
P4	15	40	High - 1

Gantt Chart

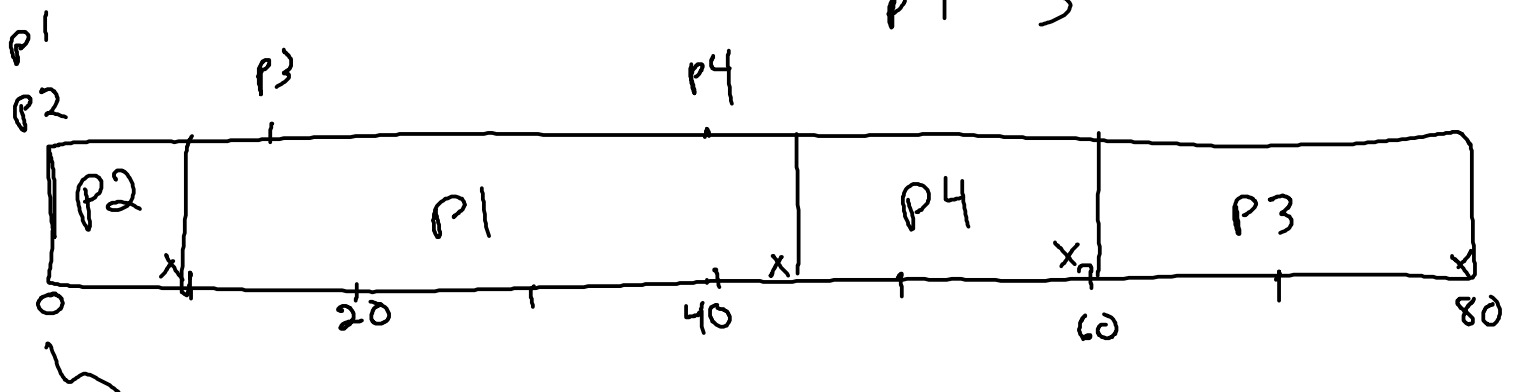
p2: wait	35	wait	
turnaround	45	p1	0
response	35	p2	35
		p3	30
		p4	25
			avg. wait:
			22.5

FCFS

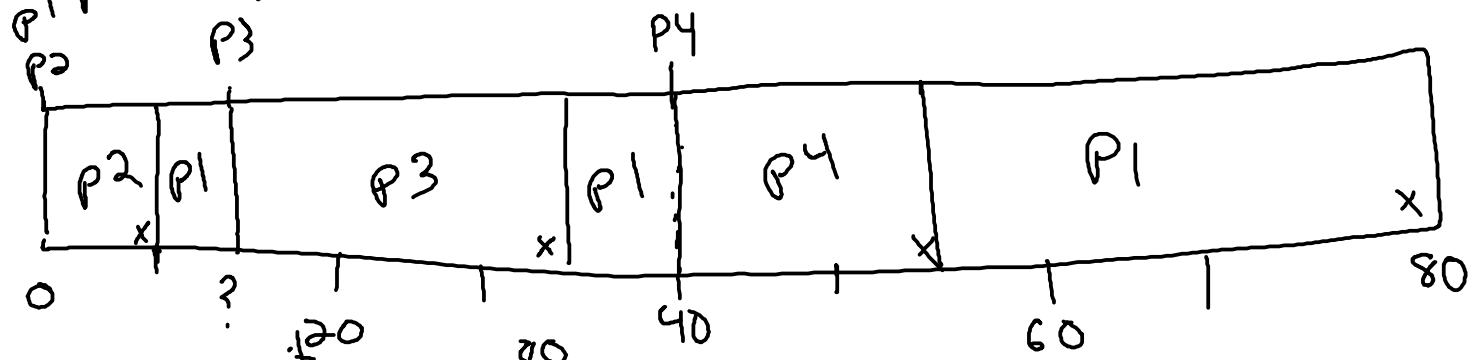


Shortest Job first (SJF)

	wait
p1	10
p2	0
p3	45
p4	5
	avg:
	15



preemptive SJF (shortest remaining time first)



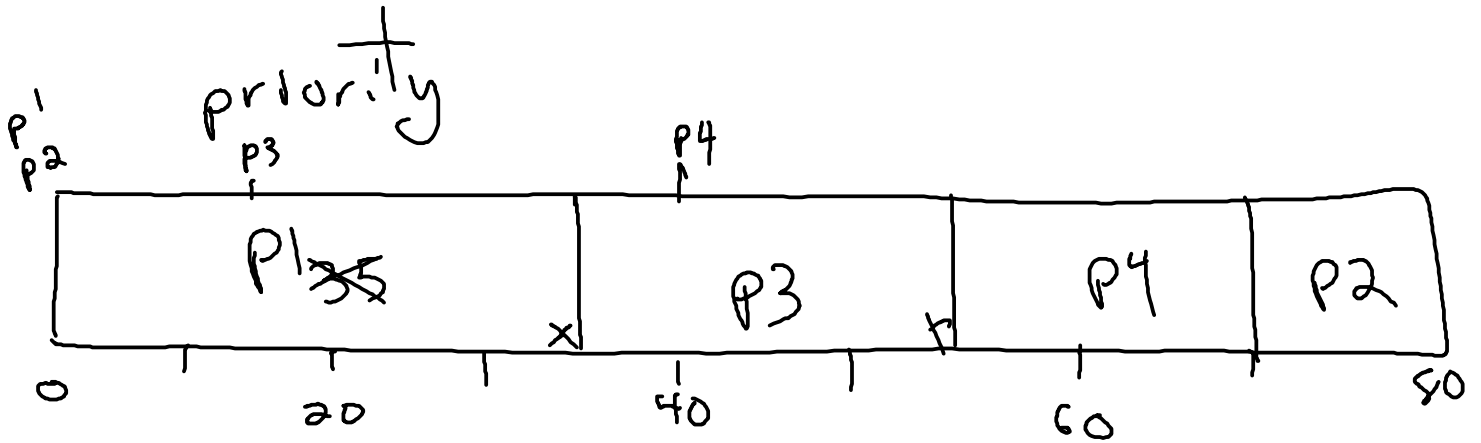
	wait
P1	45
P2	0
P3	0
P4	0

$$t_a = 80$$

$$burst = 35$$

$$80 - 35 = 45$$

$$avg: 11.25$$

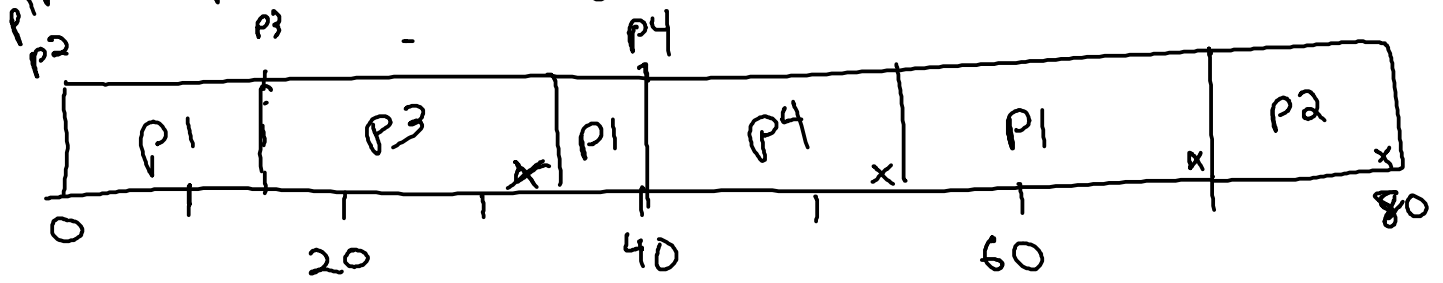


P1	0
P2	70
P3	20
P4	15

$$avg: \cancel{23.75}$$

$$26.25$$

preemptive priority



P1	35
P2	70
P3	0
P4	0

$$\text{avg} = 26.25$$