

## Simulation of PreEmptive Priority Queue

### M/M/1 Model

P#	Arrival Time	Service Time	Priority	Start	End	Turn Around	Wait Time	Response Time
1	0	19	3	0	70	70	51	0
2	4	18	3	70	88	84	66	66
3	7	12	2	7	30	23	11	0
4	9	17	3	88	105	96	79	79
5	15	5	1	15	20	5	0	0
6	18	6	1	20	26	8	2	2
7	27	13	2	30	43	16	3	3
8	30	15	2	43	58	28	13	13
105				330		225	163	

### M/M/2 Model

P#	Arrival Time	Service Time	Priority	Server	Start	End	Turn Around	Wait Time	Response Time
1	0	19	3	A	0	47	47	28	0
2	4	18	3	B	4	28	24	6	0
3	7	12	2	A	7	24	17	5	0
4	9	17	3	B	45	62	53	36	36
5	15	5	1	A	15	20	5	0	0
6	18	6	1	B	18	24	6	0	0
7	27	13	2	A	27	40	13	0	0
8	30	15	2	B	30	45	15	0	0
105				180		75	36		

### Formula:

- Turn Around=End -Arrival Time
- Wait Time =Turn Around -Service Time
- Response Time=Start-Arrival Time