

Homework 2

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Cse460
T/TH @ 2pm

1. the first time running has n choices, the second run has $n-1$ choices, and this process continues to lower the choices by 1 each time. This results in giving $n!$ Choices.

2. a. The average wait time would be 10.5. This comes from $(8 + 11.6 + 12)/3$
 b. The average time would be 9.5. This comes from $(8 + (8) + (9 - .4 + 4))/3$
 c. Time for p3 would be 1

Time for p2 would be 5.6 ----- $(.6 + 1 + 4)$

Time for p1 would be 14 ----- $(1 + 1 + 4 + 8)$

Average time: 6.86 ----- $(1 + 5.6 + 14)/3$

3. a.

RR:

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| P1 | P2 | P3 | P4 | P5 | P1 | P3 | P5 | P1 | P5 | P1 | P5 | P1 | P5 | P1 | P1 | P1 | P1 | P1 | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

FCFS:

| | | | | | |
|----|----|----|----|----|----|
| P1 | P2 | P3 | P4 | P5 | |
| 0 | 10 | 11 | 13 | 14 | 19 |

NPP:

| P1 | P2 | P3 | P4 | P5 | |
|----|----|----|----|----|----|
| 0 | 10 | 11 | 13 | 14 | 19 |

SJF:

| P1 | P2 | P3 | P4 | P3 | P5 | P1 | |
|----|----|----|----|----|----|----|----|
| 0 | 1 | 2 | 5 | 6 | 7 | 12 | 21 |

b.

| | P1 | P2 | P3 | P4 | P5 | Avg. |
|------|----|----|----|----|----|------|
| FCFS | 10 | 11 | 13 | 14 | 19 | 13.4 |
| SJF | 19 | 1 | 4 | 2 | 9 | 7 |
| NPP | 16 | 1 | 18 | 19 | 6 | 12 |
| RR | 19 | 2 | 7 | 4 | 14 | 9.2 |

c.

RR: p1 = 9, p2 = 1, p3 = 5, p4 = 3, p5 = 9, avg: 5.4

FCFS: p1 = 0, p2 = 10, p3 = 11, p4 = 13, p5 = 14, avg: 9.6

NPP: p1 = 6, p2 = 0, p3 = 16, p4 = 18, p5 = 1, avg: 8.2

SJF: p1 = 9, p2 = 1, p3 = 5, p4 = 3, p5 = 9, avg: 5.4

d. SJF has the lowest average time