

Chapter 7 HW

1. Compute the response time and turnaround time when running three jobs of length 200 with the SJF and FIFO schedulers.

A:

FIFO:	turnaround.	response	wait-time
Job A	200	0.	0
Job B.	400	200.	200
Job C	600	400.	400

SJF:	turnaround.	response	wait-time
Job A	200	0.	0
Job B.	400	200.	200
Job C	600	400.	400

2. Now do the same but with jobs of different lengths: 100, 200, and 300

A:

FIFO:	turnaround.	response	wait-time
Job A	100	0.	0
Job B.	300	100.	100
Job C	600	300.	300

SJF:	turnaround.	response	wait-time
Job A	100	0.	0
Job B.	300	100.	100
Job C	600	300.	300

3. Now do the same, but also with the RR scheduler and a time-slice of 1.

A:

Len of A/B/C = 9, 8, 5

RR:	turnaround.	response	wait-time
Job A	22	0.	13
Job B.	21	1.	13
Job C	15	2.	10

4. For what types of workloads does SJF deliver the same turnaround times as FIFO?

A:

When the given jobs' lengths are in non-decreasing order, SJF and FIFO has the same turnaround times.

5. For what types of workloads and quantum lengths does SJF deliver the same response times as RR?

A:

When the given jobs have the same lengths as the given quantum lengths, SJF and RR has the same turnaround times.

6. What happens to response time with SJF as job lengths increase? Can you use the simulator to demonstrate the trend?

A:

If job lengths increase, the response time with SJF increases at the same rate.

7. What happens to response time with RR as quantum lengths increase? Can you write an equation that gives the worst-case response time, given N jobs?

A:

If quantum lengths increase, the response time with RR increases at the same rate.

L = quantum lengths

The worst-case response time = $\sum_{k=0}^{N-1} Lk / N$