Response time = first_run – arrival   *Turnaround = completion – arrival*

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

	SJF		FIFO	
	Response Time	Turnaround	Response Time	Turnaround
Job 0	0	200	0	200
Job 1	200	400	200	400
Job 2	400	600	400	600

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

	SJF		FIFO	
	Response Time	Turnaround	Response Time	Turnaround
Job 0	0	100	0	100
Job 1	100	300	100	300
Job 2	300	600	300	600

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

	Response Time	Turnaround
Job 0	0	198
Job 1	1	299
Job 2	2	300

Question 4: For what types of workloads does SJF deliver the same turn-around times as FIFO?
Answer: <u>When the jobs arrive at the same time, and when jobs are longer compared to the previous job.</u>

Question 5: For what types of workloads and quantum lengths does SJF deliver the same response times as RR?
Answer: <u>When all jobs have the same length, including the quantum length.</u>

Question 6: What happens to response time with SJF as job lengths increase? Can you use the simulator to demonstrate the trend?
Answer: <u>As the job length increases, the response time increases as well.</u>

Job Length	Avg. Response Time
100, 200	50
100, 200, 300	133.33
100, 200, 300, 400	250
100, 200, 300, 400, 500	400

Question 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?
Answer: <u>As the quantum lengths increase, response time increases as well, since the time slice a job gets to run goes up.</u>

N = number of jobs L_n = length of job *n*

Worst-Case: RT = $\sum L_n$ / N
                     = Sum of all the lengths, divided by the number of lengths