Math 3550 HOMEWORK #8 Name:

Due 11/20/2022, 11:30 a.m.

Solve the following problems and staple your solutions to this cover sheet. (Computer outputs must be put in the appropriate place in the solution, not attached as an appendix. You may physically cut and paste the output in the problem or allow appropriate space in the printout to add your hand written work.)

1. Sec 5.1, Prob 1.
2. Sec 5.1, Prob 4. See the associated Mathematica notebook in the course website.
3. Sec 5.2, Prob 1.
4. Sec 5.2, Prob 2.
5. Sec 5.3, Prob 1. See the associated Mathematica notebook in the course website.
6. Sec 5.3, Prob 3. Do this simulation on your own. You can modify earlier ones or write a new one.
7. Consider the arrival times and corresponding unloading times, both in minutes, of six ship coming into a harbor with **one** dock. Build a table like table 5.14 in the book and find the average time in harbor, average wait time, maximum wait time of ships and percentage of the time dock is busy.

	Ship 1	Ship 2	Ship 3	Ship 4	Ship 5	Ship 6
Time between successive ships	15	30	80	45	100	20
Unloading time	45	35	65	70	40	60

8. Consider the arrival times and corresponding unloading times, both in minutes, of ten ship coming into a harbor with **two** docks. Each ship will take the first available dock. Using a table (like table 5.14) determine the average time in harbor, average wait time and maximum wait time of ships and percentage of the time the harbor (both docks simultaneously) is busy.

Ship number	1	2	3	4	5	6	7	8	9	10
Time between successive ships	15	10	5	35	25	20	40	30	60	20
Unloading time	45	65	70	30	40	60	50	30	20	40

9. Free points!
10. Free points!