

Homework is due at the start of class on 11/18. Please turn in a hardcopy. It can be handwritten. Please show all computations.

Reading from your textbook: End of Chapter 6, plus all of Chapter 7.

Remember that when reading you should cover all the “Answers” and derivations and try them yourself first.

Exercises: All the exercises are ANALYSIS problems.

1. Problem 7.2 from your book.

- Note: For part (b), you need to be able to argue what’s happening to the queue at each server. Are the two queues the same, or very different?
- Note: For part (d), you don’t need a “proof,” but rather just an argument.

2. Problem 7.3 from your book.

3. Problem 7.4 from your book.

- Note: Ignore the first line about the observation interval.
- Note: The problem asks you to graph the effects on X and $\mathbf{E}[R]$. You can skip making the graphs because it’s time-consuming. Just explain in words what the improvement does for the case where N is small and N is large.