

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

**Reading: Chapter 2, Chapter 3, Section 4.1 of your textbook**

This is a lot to read. The reading portion will normally be shorter. Take your time and ask questions. Cover all the “Answers” and derivations and try them yourself first.

**Modeling Exercise:** Would you describe your computer system as an open system or a closed one? Explain why. No need to write more than half a page.

**Other Exercises: 2.1, 4.2, 4.7**

Exercise 4.7 is not in your book, but is available below:

**4.7 [Generating a Geometric Distribution]** Give a simple but efficient algorithm for generating values from a  $\text{Geometric}(p)$  distribution. Now use your algorithm to generate 50 instances of  $\text{Geometric}(0.2)$ . Determine the sample mean and compare with the desired answer.