Due Date: Wednesday April 27, 2011

Text Book, Chapter 3 Exercises:

Assigned Problems (To be turned in for Credit)

3.6: “Starting at a fixed time, each car entering an intersection…” (page 90)
   Answer the following parts:
   a. What are the possible X values? *(same as in book)*
   b. Enumerate all possible outcomes in \( S_1 = X^{-1}(1), S_2 = X^{-1}(2), \) and \( S_3 = X^{-1}(3) \).
      Remember, \( S_i = X^{-1}(x_i) = \{ s \in S : X(s) = x_i \} \). *(Do not answer “List five outcomes and their associated X values.”)*

3.10: “The number of pumps in use…” (page 90)
3.12: “Airlines sometimes overbook flights…” (page 98)
3.14: “A contractor is required by a county planning department…” (page 98)
3.16: “Some parts of California are particularly earthquake-prone…” (page 98)
3.24: “An insurance company offers its policy holders…” (page 99)
3.32: “An appliance dealer sells three different models of upright…” (page 107)
3.35: “A small market orders copies of certain magazine…” (page 107)

Remember that you must *show all work* when answering the questions. If the answer to the question is a calculation, be sure to write down the formula you used or describe how you made the calculation.

Suggested Problems that do not need to turn in:

3.7: For each random variable described here, describe…” (page 90)
3.13: “A mail-order computer business has six telephone lines…” (page 98)
3.18: “Two fair six-sided dice are tossed independently…” (page 99)
   Try to write the answers in algebraic form as well: \( p_M(m) \) and \( F_M(m) \): for generic \( m \).
3.23: “A consumer organization that evaluates new automobiles…” (page 99)
3.25: “In Example 3.12, let \( Y \) = the number…” (page 100)
3.34: “Suppose that the number of plants of particular type…” (page 107)
3.39: “A chemical supply company currently has in stock…” (page 107)

Notes:

- Please submit your Assignment at the beginning of the class. As discussed in the Syllabus, late submissions will not be accepted.
- Remember that you must show all work when answering the questions. If the answer to the question is a calculation, be sure to write down the formula you used or describe how you made the calculation.
- Answers to Questions regarding probabilities should be given in the decimal format.