M362K (57055), Homework #1
Instructor: Ravi Srinivasan

Due: 12pm, Monday, Feb. 1

Note: To get credit, please show your work and not only your final answer. Please keep answers
organized in the same order the problems have been assigned.

Complete the following problems from ``Probability,'' by Jim Pitman:

--Equally likely outcomes--
* pp. 09-10, #2,4,6,8 (for each problem, make an outcome space and indicate how the event of
interest can be represented as a subset of your outcome space)

--Probability spaces, distributions, set theory--
* pp. 30-32, #2,4,6,8,10,11,13,14

--Interpretations of probability--
* Suppose I were to ask someone what he/she thought the chances were of
    (a) rain today
    (b) rain tomorrow
    (c) rain both today and tomorrow
    (d) rain either today or tomorrow.
After some thought, they give 30%, 40%, 20%, and 60%, respectively, as answers. Are these
subjective probabilities consistent with the rules (axioms) of probability? Why or why not?

--Conditional probability, independence--
* pp. 45-46, #2,4,5,6,8,10,12
* pp. 74-75, #4,8