Assignment #5

Due **Friday, May 14**.

To do but not hand in:

pp. 122-3, Exs. 9, 11, 13;

p. 133, Exs. 5, 11;

p. 138, Ex. 14;

p. 144, Ex. 8;

To hand in:

p. 122, Ex. 10;

p. 126, Ex. 7;

p. 133, Ex. 6;

pp. 137-8, Exs. 3, 8;

p. 145, Ex. 13;

G-1 and G-2 below.

These two problems are warm-ups for future problems.

Problem G-1. From a deck of playing cards, take Ace (= 1), 2, 3, 4 of all four suits. Find an arrangement of these cards as follows: The cards are laid in a 4×4 square. Each row of the square has four different suits and four different numbers. So does each column.

Problem G-2. In statistical experiments involving, say, plants, it is helpful to be able to overlap various conditions in an efficient but uniform way. For example, show how to take a set of seven plants and designate seven blocks of three plants each so that (i) any two plants are in exactly one block and (ii) any two blocks have exactly one plant in common. (Then one block could be "extra sun", one could be "extra water", one could be "rich soil", etc.)