Due date: Apr 11th, Tue.

1. Solve problems (i) through (v) in Section 3.4. [page 77].

2. Write a Prolog program which takes a tree T and an element E in the tree T and returns as output a tree T\textsubscript{new}, where T\textsubscript{new} is obtained by deleting the element E from the tree T. (The algorithm for doing this exercise was discussed in class.)

3. Exercise 8.2.1 (i) and (ii) [page 153-154].

4. Exercises 8.3.1 (i), (iii), and (vii) [page 161-162].

5. Consider the following Prolog program
   
   sub([],X).
   sub([X|L], L1) :- suffix([X|L2], L1), sub(L, L2).

   suffix(L, L).
   suffix(L, [H|R]) :- suffix(L, R).

?\(-\text{sub}([X,Y], [c,a,t,s]).

Show the search tree for the query above. Explain what the predicates sub/2 and suffix/2 do.