Steven Murr

HW 11.2

Problems = { 1-5 all, 37}

1) Build a binary search tree for the words banana, peach, apple, pear, coconut, mango, and papaya using alphabetical order.
**See attached paper.

2) Build a binary search tree for the words oenology, phrenology, campanology, ornithology, ichthyology, limnology, alchemy and astrology using alphabetical order.
**See attached paper.

3) How many comparisons are needed to locate or to add each of these words in the search tree for Exercise 1, starting fresh each time?

a) pear
   3 - banana, peach, pear
b) banana
   1 - banana
c) kumquat
   4 - banana, peach, coconut, kumquat
d) orange
   5 - banana, peach, coconut, mango, orange

4) How many comparisons are needed to locate or to add each of the words in the search tree for Exercise 2, starting fresh each time?

a) palmistry
   4 - oenology, phrenology, ornithology, palmistry
b) etymology
   6 - oenology, campanology, ichthyology, alchemy, astrology, etymology
c) paleontology
   4 - oenology, phrenology, ornithology, paleontology
d) glaciology
   5 - oenology, campanology, ichthyology, limnology, glaciology

5) Using alphabetical order, construct a binary search tree for the words in the sentence "The quick brown fox jumps over the lazy dog."
**See attache paper.

37) Draw the subtree of the game tree for tic-tac-toe beginning at each of these positions. Determine the value of each of these subtrees.
**See attached paper.