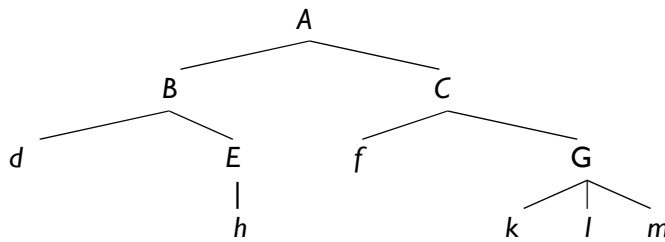Homework Assignment #5
Due Tuesday November 20th, beginning of class

Name: _____

Tree Structures

Question 1:   *Relations between nodes*

Based on the tree structure above, fill in the blanks below with one of the following terms:
dominates, immediately dominates, precedes, immediately precedes. Choose the most specific one
applicable (i.e. choose *immediately dominates* over *dominates* and *immediately precedes* over
precedes whenever you can)

  a.   A _____ h   b.   C _____ G

  c.   B _____ E   d.   h _____ l

  e.   d _____ k   f.   A _____ C

Question 2:   *Kinds of nodes*

Which node is the root node of the tree?

What is the mother node of *k, l, m* ?

List all terminal nodes in the tree:

Which node is the sister of *f* (sister nodes have the same parent node)?

Write the tree as a labeled bracket structure:

Question 3:   *From brackets to trees*

Write down the following as trees

[A [B c [D e f g]] [H i k]]

[S [NP the dog] [VP runs]]

Finding constituents

Question 4:   *Show that the underlined chunks are constituents by using one of our tests*

for example: The smaller anteater is called Bruno.
                 It   is called Bruno.

a.   The dog chased <u>the cat</u>.

b.   The cat <u>escaped from the dog</u>.

c.   <u>The dog</u> was wearing a red hat.

d.   The children are not supposed to swim in <u>the river</u>.

e.   The children are not supposed to swim <u>in the river</u>.

f.   The children are not supposed to <u>swim in the river</u>.

g.   That <u>old, ragged clock</u> started to work again.

Question 5:   *Are the following underlined chunks constituents? If yes, support your answer with one of our tests.*

for example: The small anteater ate his breakfast fast.
                 not a constituent

a.   <u>The dog chased</u> the cat.

b.   The dog <u>chased the cat</u>.

c.   The <u>dog was wearing</u> a red hat.

d.   The children <u>are not supposed</u> to swim in the river.

e.   The old, ragged clock <u>woke me up this morning</u>.

Question 6:   *Draw constituency trees for the following sentences.*

The   dog   chased   the   cat.

This   small   child   ate   that   large   pizza.

This   small   child   ate   that   large   pizza   quickly.

This   small   child   ate   that   large   pizza   quickly   by   the   window.