1. Draw all possible trees with the following preorder traversal:

   A B C

2. How many different trees have the following preorder traversal? You don’t need to give all of the trees, just count them.

   A B C D

3. Assuming a tree is serialized using the “Print null trees” method, draw the tree for each of the following:

   (a) ABD///CE/FG////
   (b) AB/D///CE///
   (c) A/B/CDE////

4. Assuming a tree is serialized using the “Print an extra 0 bit for internal nodes, and an extra 1 bit for leaves” method, draw the tree for each of the following:

   (a) A_0B_1C_0D_1E_0F_1G_1
   (b) A_0B_1C_1D_0E_1F_0G_1H_1I_1

5. Assuming a general tree is serialized using the “Print an end of child marker” method, draw the tree for each of the following:

   (a) ABF))/CG))/DH]/I))/E))
   (b) ABCD))/EFG))))
   (c) ABE))/F(G))/C)/DH))/I))/J)))

6. Write a method Serialize, that takes as input a general tree, and serializes it using the “Print Child end of child Marker” method. Use a “)” for an end-of-child marker. Skeleton code is available on the course website.

Please place both your GenNode.java (which will likely be unchanged from what is provided) and Serialize.java into subversion under:

https://www.cs.usfca.edu/svn/<username>/cs245/Homework5/