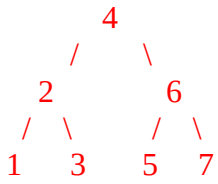
1) (5 pts) ALG (Binary Trees)

a) Draw **a binary search tree** of with 5 nodes (storing positive integers) that has the maximum possible height. (1 pt)

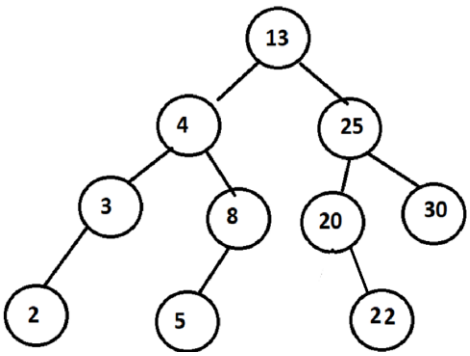
Grading: There are 16 possible structures give 1 point for any correct answer 0 otherwise. (For each item, you may choose the smallest or largest unused item, so you have 2 choices when placing each item but the last.)

b) Draw another binary search tree with 7 nodes (storing positive integers) that has the minimum possible height. (1 pt)

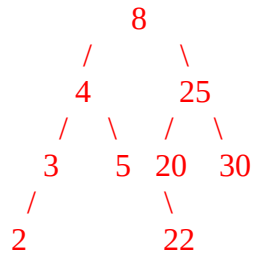


Grading: only one possible structure works here, give 1 point if their answer is a correct one, 0 otherwise.

c) Re-draw the following binary search tree after deleting the root node. (3 pts)



There are two possible answers: **(Grading: 1 pt root, 1 pt untouched side, 1 pt adjusted side Automatic 0 out of 3 if not a valid Binary Search Tree.)**



OR