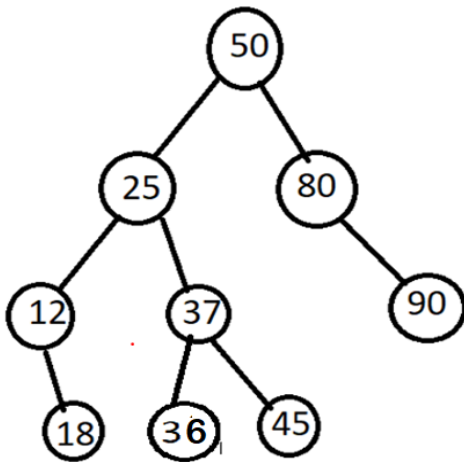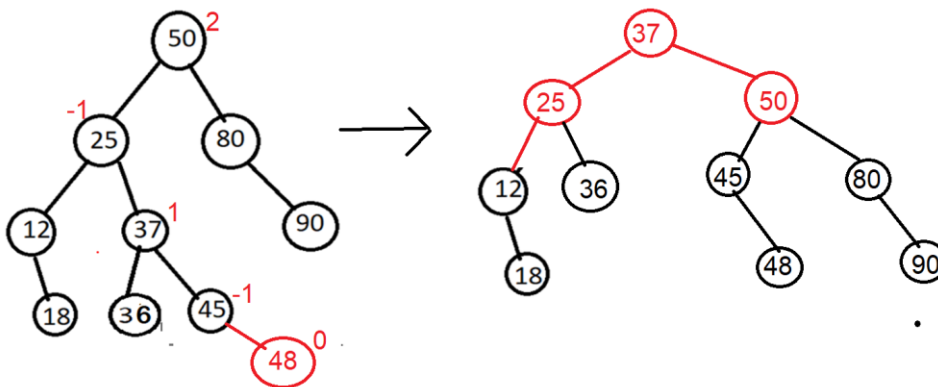**3)** (5 pts) ALG (AVL Trees)

Show the final result of inserting 48 into the AVL tree below. Draw a box around your final answer.

Answer:

Grading: <u>Automatic 0 out of 5 if not valid BST or not valid AVL tree.</u>

       1 pt valid AVL with right values (0 if this isn't satisfied)
       1 pt for 37 at root,
       1 pt for 25 left or root
       1 pt for 50 right of root
       1 pt for the rest being attached properly

Note: no need to show the difference in left and right heights.

Computer Science Foundation Exam

January 13, 2024

Section C

ALGORITHM ANALYSIS

NO books, notes, or calculators may be used,
and you must work entirely on your own.

SOLUTION

Question #	Max Pts	Category	Score
1	10	ANL	
2	5	ANL	
3	10	ANL	
TOTAL	25		

You must do all 3 problems in this section of the exam.

Problems will be graded based on the completeness of the solution steps and <u>not</u> graded based on the answer alone. Credit cannot be given unless all work is shown and is readable. Be complete, yet concise, and above all <u>be neat</u>. For each coding question, assume that all of the necessary includes (stdlib.h, stdio.h, math.h, string.h) for that particular question have been made.