

3) (5 pts) ALG (AVL Trees)

Insert the following integers into an AVL tree in the given order. Whenever an insertion causes the tree to become unbalanced, rebalance it immediately before proceeding with the next insertion. Continue this process, rebalancing as needed, until all elements have been added. Put a box around the state of the tree after each of the bolded-underlined elements are inserted. (Each of these pictures will be worth 1 point.)

50, 80, **70**, 99, **85**, **100**, **95** and **84**

Computer Science Foundation Exam

January 11, 2025

Section C

ALGORITHM ANALYSIS

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

Name: _____

UCFID: _____

Question #	Max Pts	Category	Score
1	5	ANL	
2	10	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 not 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 be neat. 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.