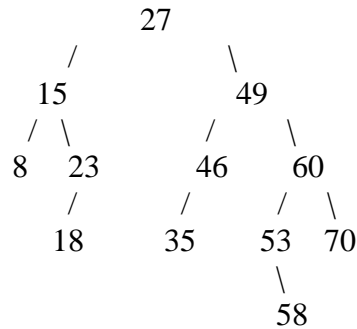
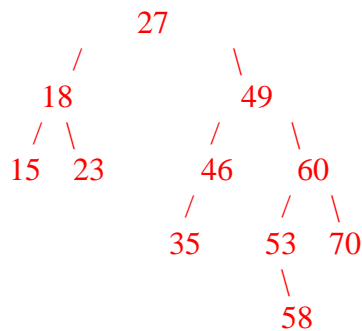
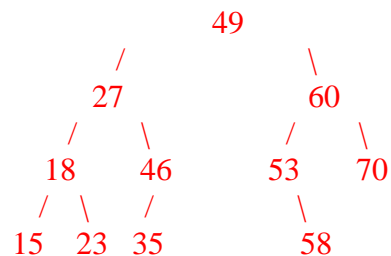


3) (10 pts) ALG (AVL Trees)

Show the result of deleting the value 8 from the AVL Tree pictured below. In this process, there are two rebalance operations that occur, total. Please show the state of the tree after each rebalance operation. (Note: after the first rebalance operation, the tree, as a whole, will not be balanced.)

**Picture after first rebalance****Picture after second(last) rebalance**

Grading: **4 pts first picture (3 pts for left side, 1 pt for keep right side untouched)**
 6 pts second picture (1 pt – 49 root, 1 pt – 27 left child, 1 pt – 60 right child
 3 pts rest of the nodes, decide partial as you see fit)

Computer Science Foundation Exam

May 20, 2023

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 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.