

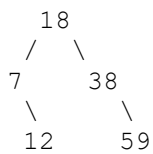
3) (10 pts) ALG (Tries and AVL Trees)

(a) (5 pts) (Tries) Suppose we insert the following strings into an initially empty trie:

cat cap catapult catalyst phosphorescent pancake pancakes

How many nodes will the resulting trie contain? Please count carefully, as credit for this question may be all or nothing

(b) (5 pts) Show what the following AVL would look like after inserting the value 42 and performing any necessary rotations.



Computer Science Foundation Exam

January 14, 2023

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.