

**Instructions**

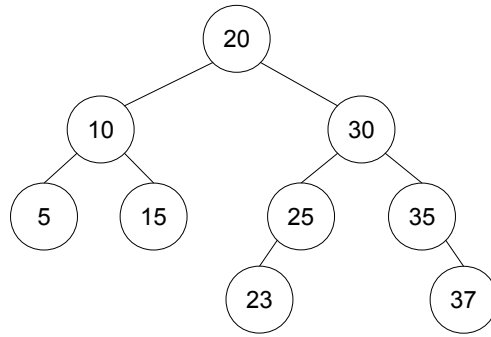
1. This is an individual assignment. You must do your own work.
2. Show all work. Incomplete solutions will **not** receive full credit

**Problem 1 (5 Points)**

Inserting words into an alphabet trie in the following order: **crikey**, **summer**, **classes**, and **class**. Show the resulting trie.

**Problem 2 (2 points)**

What is big-O of the average and worst case for insertion/deletion/search for AVL trees and splay trees?



**Problem 2 (3 Points)**

Assume the tree above is an AVL tree. Show what the resulting tree would look like after inserting 40 (and after balancing, if needed).

**Problem 3 (3 Points)**

Now assume the tree is a splay tree. Show the resulting tree after a search for 16.