

### Question 1:

Perform the following operations in order -

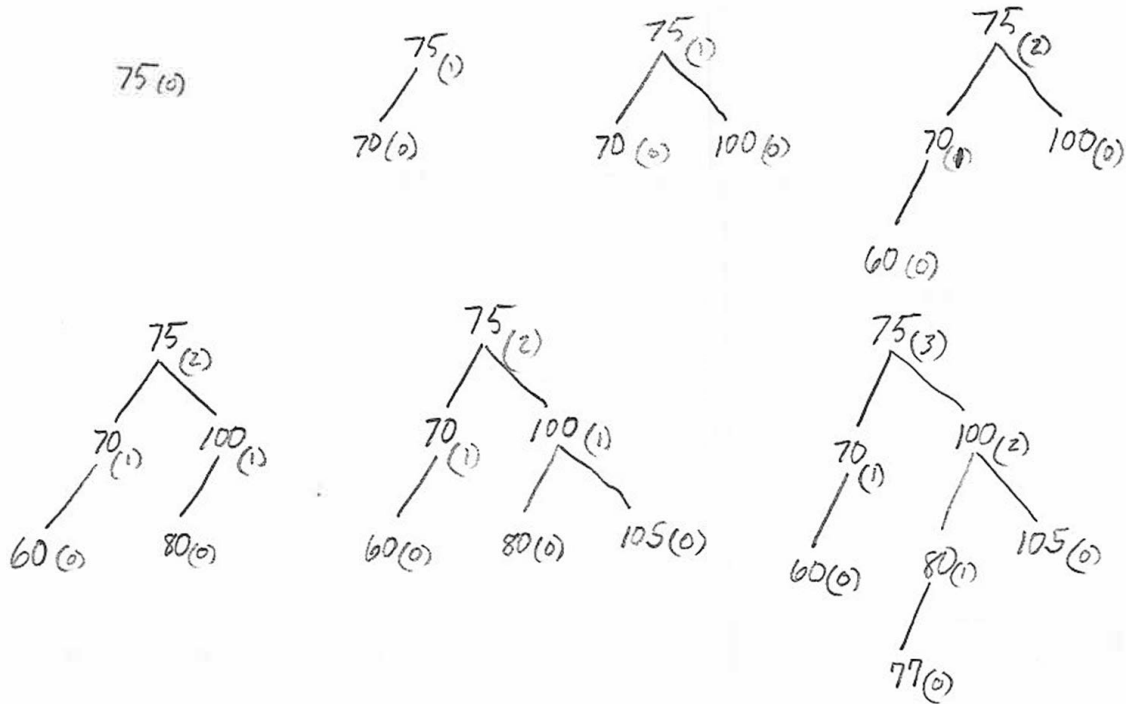
1) Insert the following values, in the order that they are given into an AVL Tree. Show the tree after each insertion:

75, 70, 100, 60, 80, 105, 77, 120

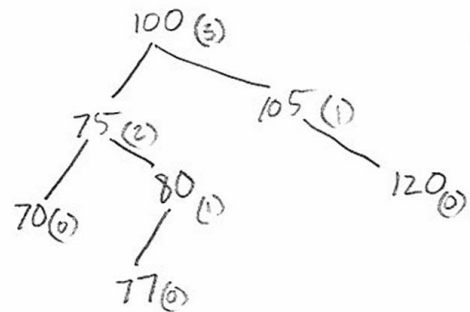
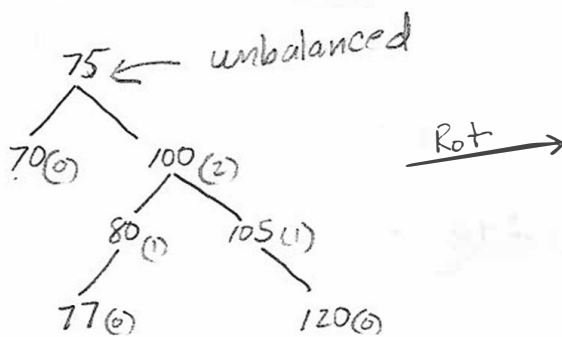
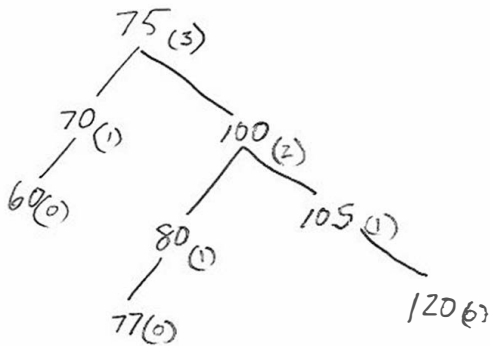
2) Take the tree from #1 and remove 60. Provide the resulting AVL tree.

3) Take the tree from #1. Remove 120 at first. Then remove 60. Show the resulting AVL trees.

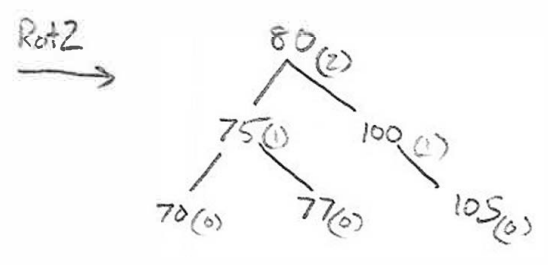
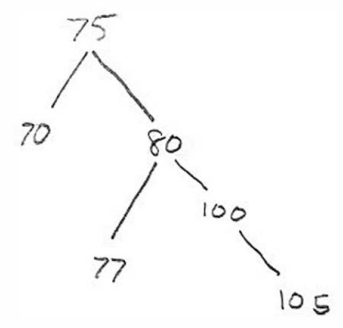
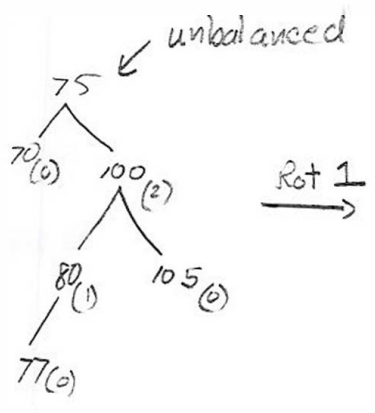
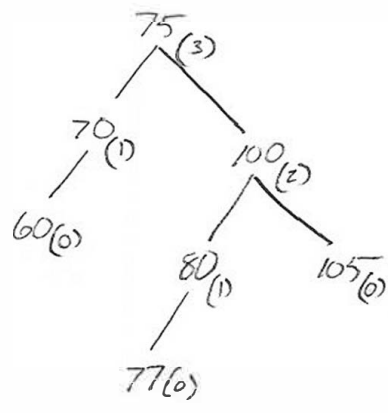
(1)



(2)



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### Question 7:

Perform the following operations in order -

1) Insert the following values, in the order that they are given into a Min Heap. Show the heap after each insertion (in graphical tree form): 30, 20, 50, 10, 5, 70

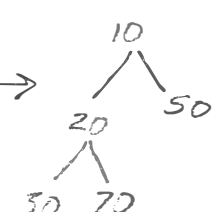
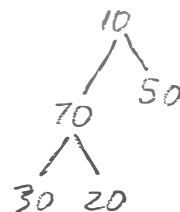
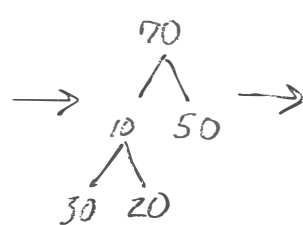
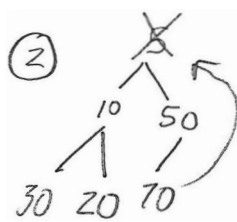
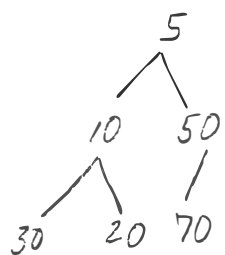
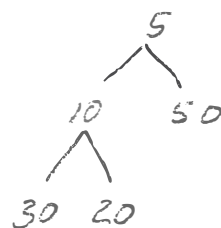
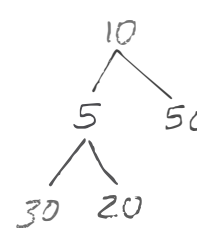
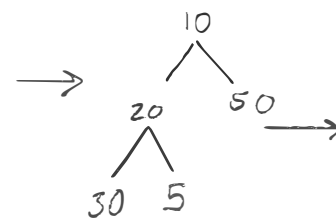
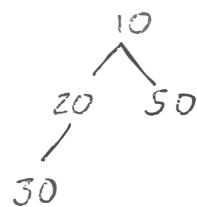
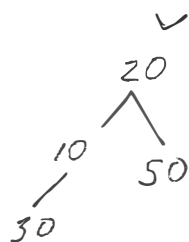
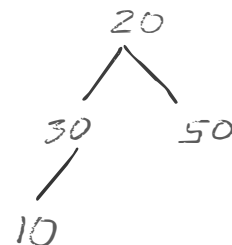
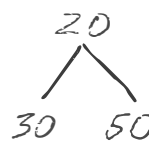
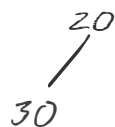
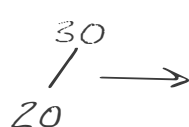
2) Remove the minimum value from the heap. Provide the resulting heap (in tree form).

3) Add 8 to the heap. Provide the resulting heap (in tree form).

4) Remove the minimum value from the heap. Provide the resulting heap (in tree form).

①

30



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