2) (5 pts) ALG (Heaps)
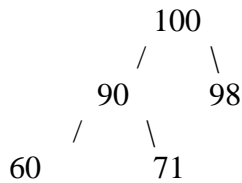
Suppose we are storing integers in a **Max-Heap** using the tree representation of heaps. The following tree shows the Max-Heap after 5 insertions. Show the result of inserting 109 into this heap, showing each step of the process. (Hint: You should draw 3 separate tree pictures.) Then, place each value from the resulting heap of 6 values into the array in the appropriate indexes corresponding to how a heap is typically stored in an array.

```
            100
           /    \
         90      98
        /   \
      60     71
```

Insert 109 Step 1:

Insert 109 Step 2:

Insert 109 Step 3:

Index	1	2	3	4	5	6
Heap Value						