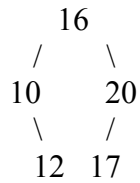


**4) (10 pts) ALG (Data Structures Tracing - AVL Trees, Binary Heaps)**

a) (5 pts) Show the result of inserting 19 into the AVL tree below. Draw a box around your final resulting tree.



b) (5 pts) In a binary heap of 100 elements, how many elements are at a depth of 6 (lowest level) from the root of the heap? (Note: the depth of an element is the number of links that have to be traversed from the root of the tree to reach it.)