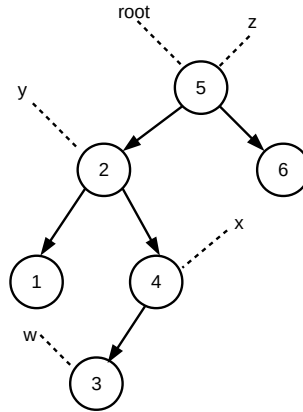


- Q1:** Given the following AVL tree stored in memory, with pointers: root, z, y, x, and w pointing to the nodes as shown in the figure. {5+10=15}
- How would the tree look like after performing these two operations: i) `rotate-left(y)` ii) `rotate-right(z)`.
 - Write code to perform the operations mentioned in part a). Appropriately set the affected pointers. Do not write the complete code of AVL insertion.



- Q2:** Write iterative code to insert a new node in a BST. {15}
- Q3:** Insert the following values in an empty AVL tree in the given order: 1, 2, 7, 3, 4, 6, 5. Show intermediate steps. {10}
- Q4:** Given the following heap structure: {6+4=10}
- Delete these values in the given order: 7, 6, 5, 4.
 - Insert the following values in the given order in the original heap (not the heap you got after part a): 10, 8, 11, 9

Show intermediate steps.

