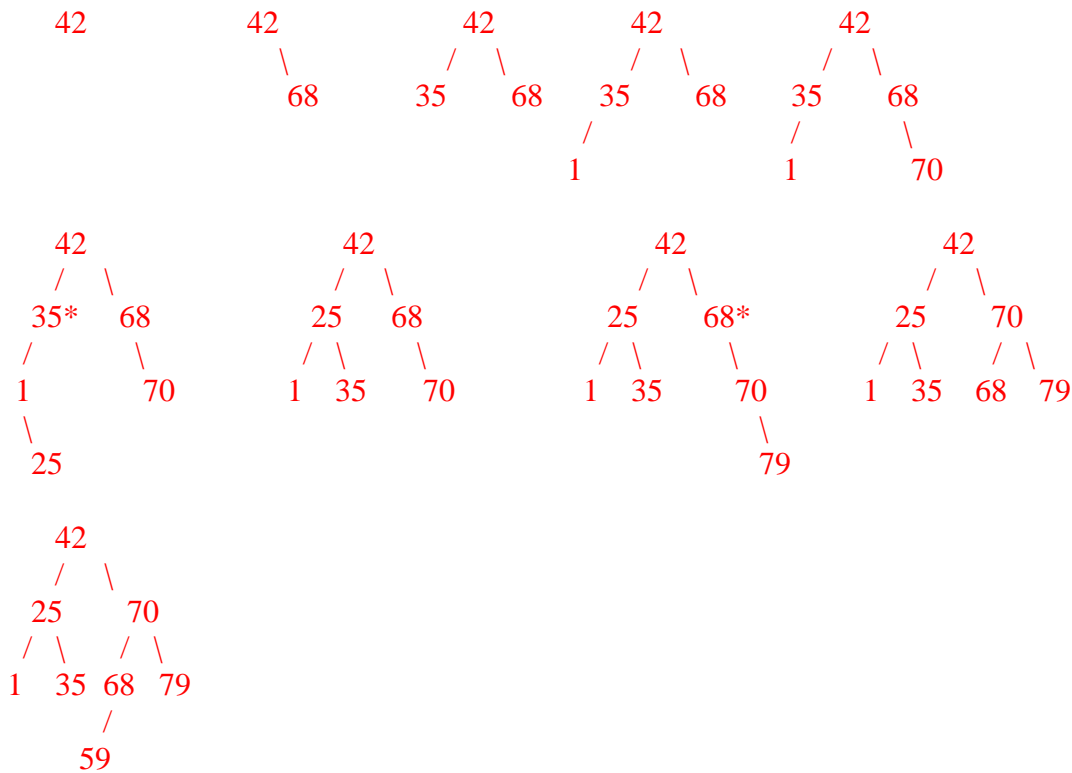


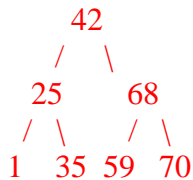
3) (10 pts) DSN (AVL Trees)

(a) (8 pts) Create an AVL tree by inserting the following values in the order given: 42, 68, 35, 1, 70, 25, 79, and 59. Show the state of the tree after each insertion.



Students should show each insertion step for 1 pt each. Imbalances should be detected and corrected for after inserting 25 and after inserting 79; detected at 35 and 68 respectively.

(b) (2 pts) Draw the state of the tree after the deletion of the node containing the value 79 from the tree at the end of part (a).



Deleting 79 creates an imbalance at 70 that must be corrected.