

Student ID: 609001002

Student Name: 林宜銘

Part I:

1. A: (c) #

2. (b) #

B: (e) #

Part II

1. a. $54 \rightarrow 40 \rightarrow 61 \rightarrow 60 \rightarrow 64 \rightarrow 92 \rightarrow 90 \rightarrow 80 \rightarrow 63 \rightarrow 57$

b. Yes

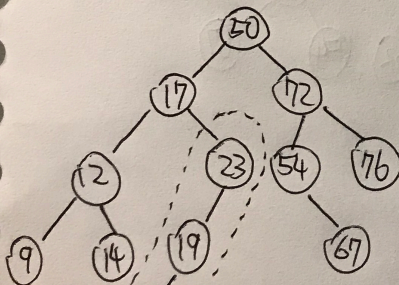
c. No

2. a. DFS: $0 \rightarrow 3 \rightarrow 5 \rightarrow 7 \rightarrow 1 \rightarrow 4 \rightarrow 2 \rightarrow 6$

b. BFS: $0 \rightarrow 3 \rightarrow 5 \rightarrow 6 \rightarrow 7 \rightarrow 2 \rightarrow 1 \rightarrow 4$

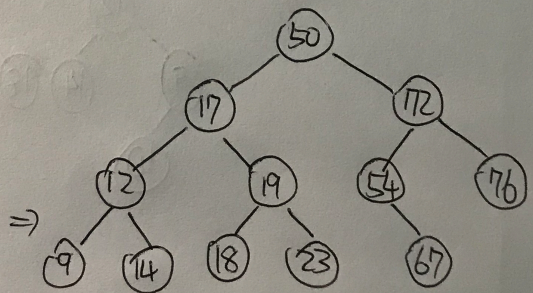
3. a. node 50: 0, node 17: 0, node 72: 1
node 23: 1, node 54: -1

b. step 1:

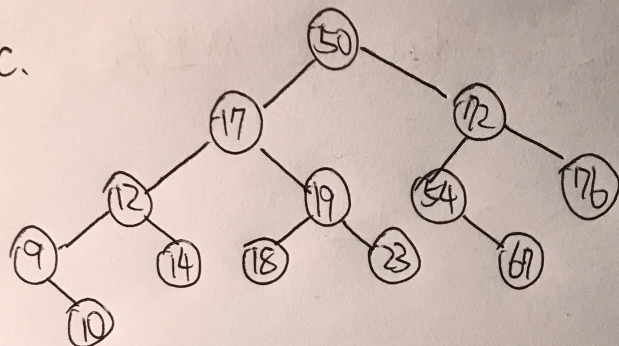


LL-condition,
do right rotation

step 2:



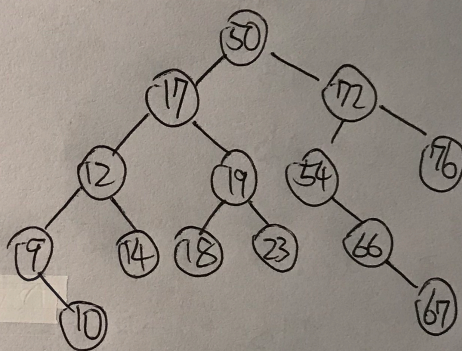
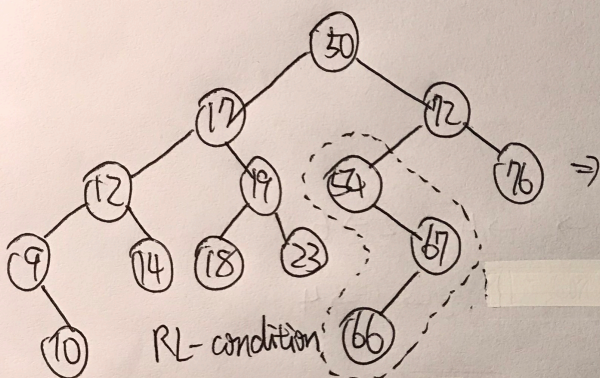
c.



tree is balanced
after inserting 10.

d. step 1:

step 2



step 3:

