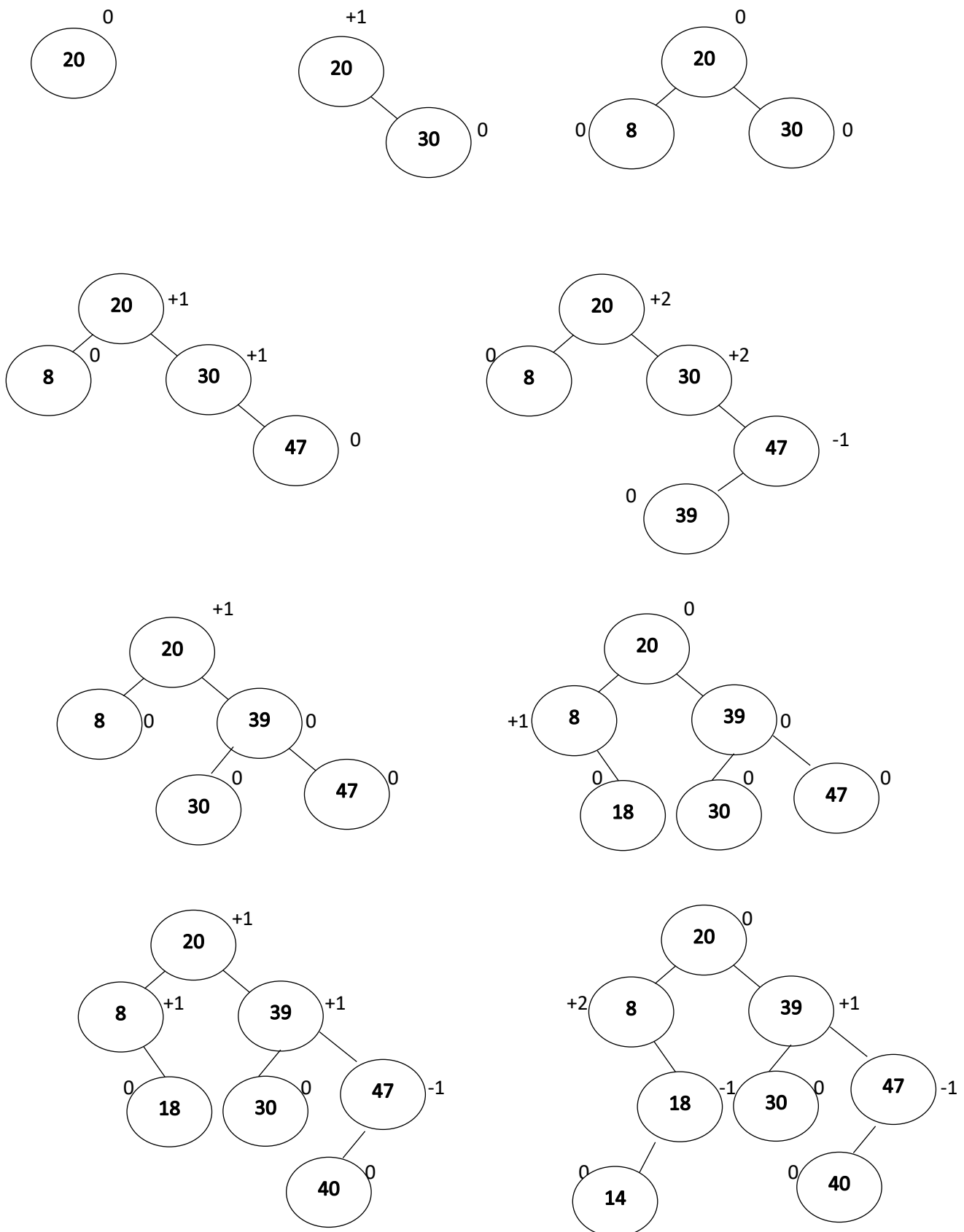
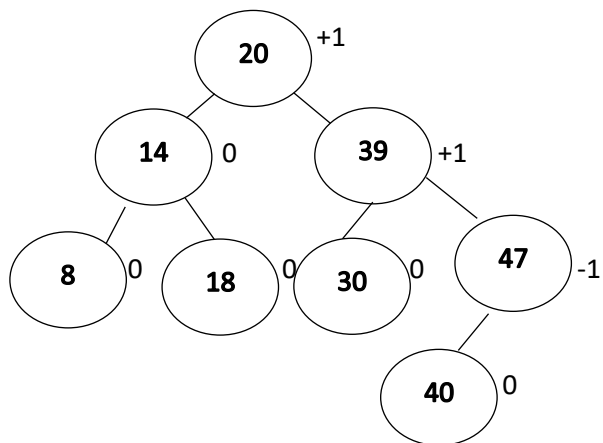


**GIT Department of Computer Engineering**  
**CSE 222/505 - Spring 2020**  
**Harun Albayrak – 171044014 - Homework 7**

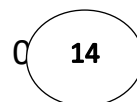
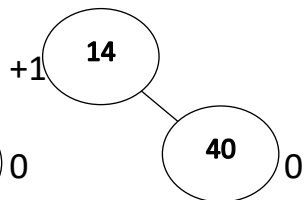
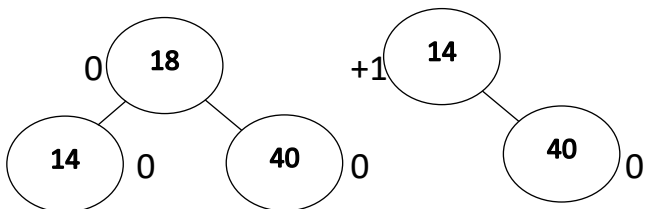
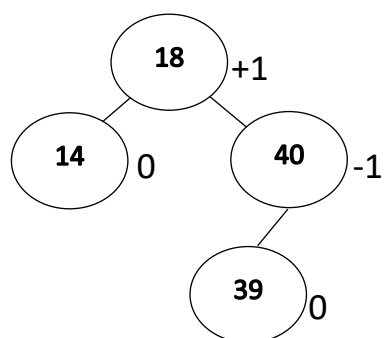
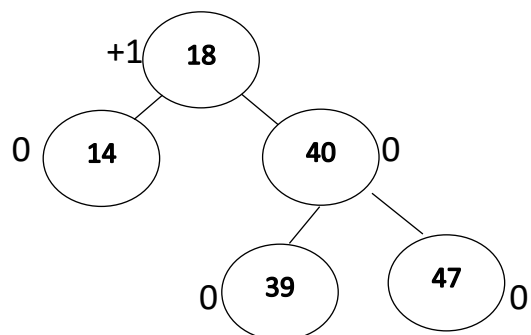
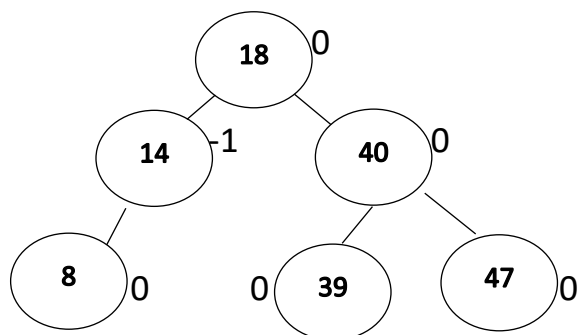
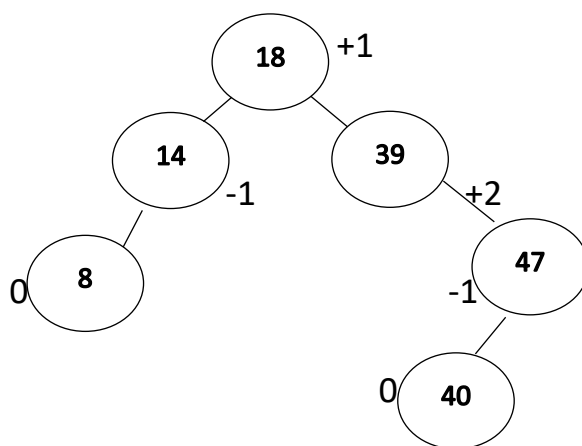
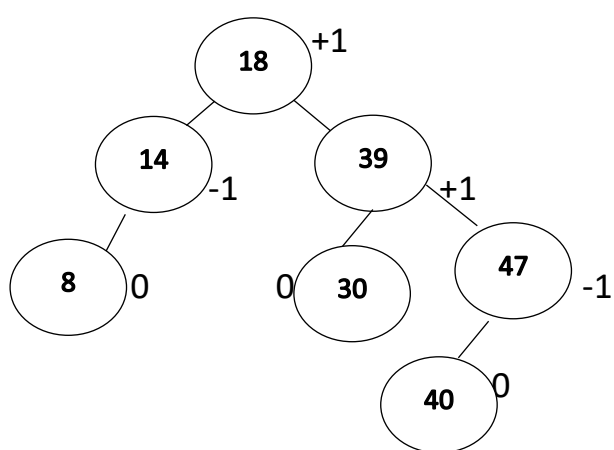
**Question 1)**

**1 – AVL Tree (Insertion 20-30-8-47-39-18-40-14)**

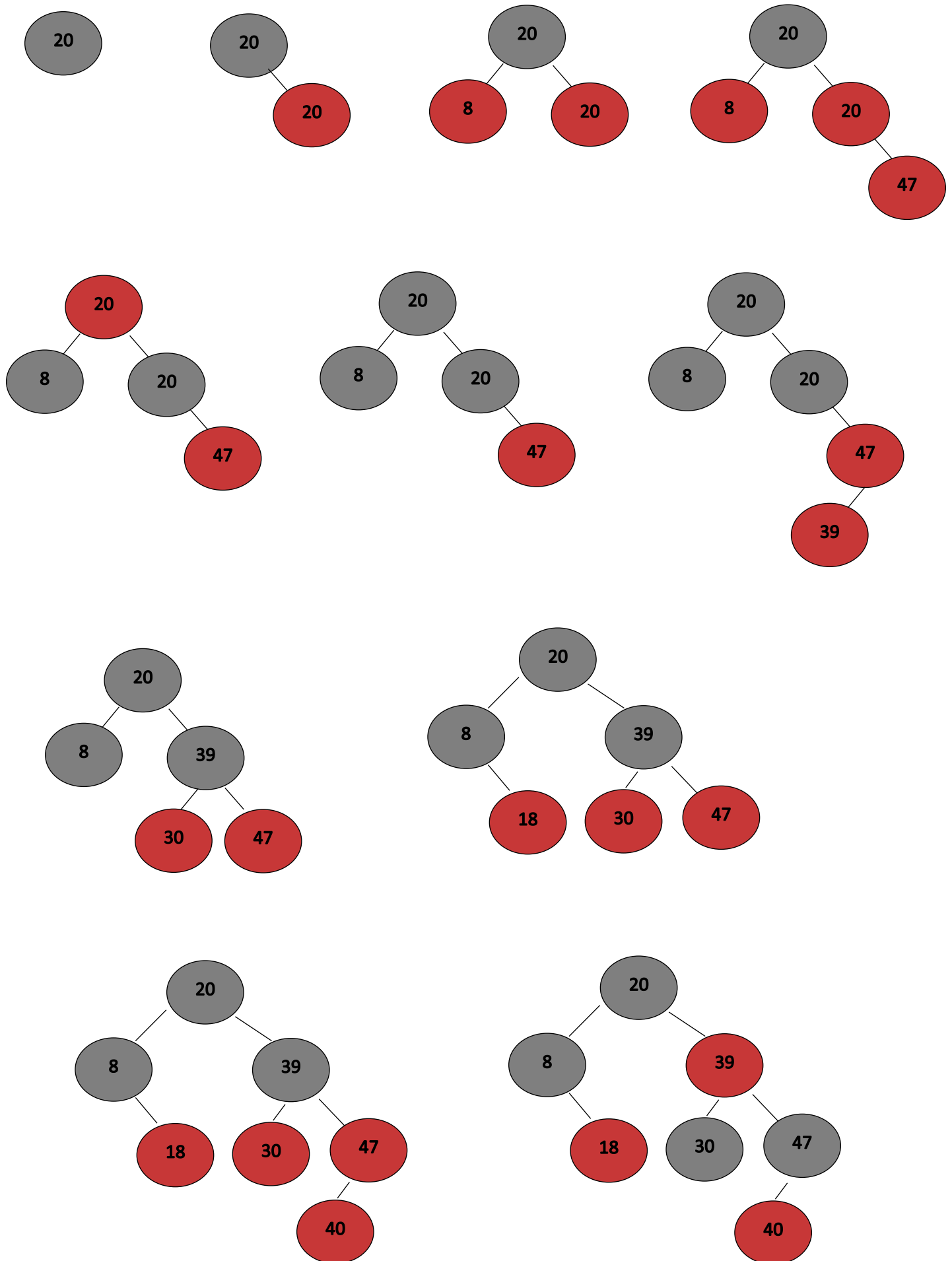


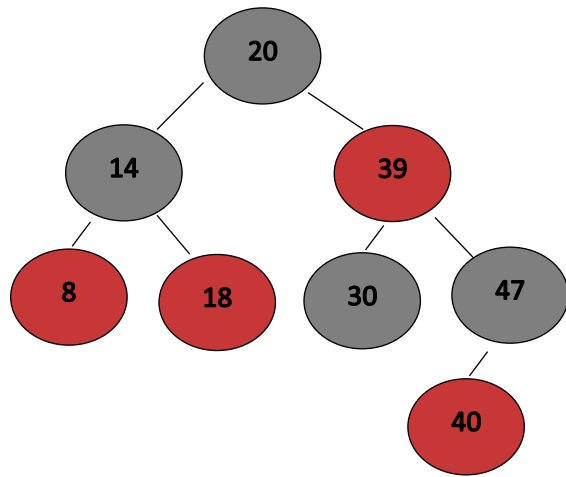
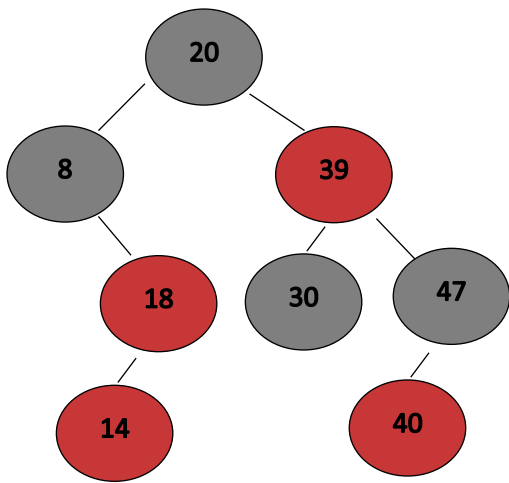


**AVL Tree (Removing 20-30-8-47-39-18-40-14)**

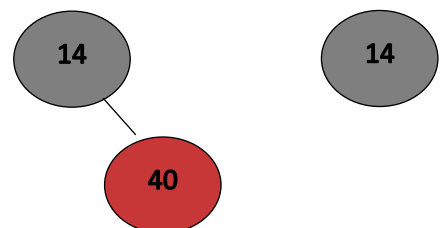
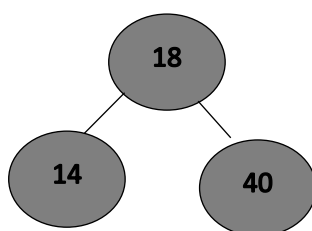
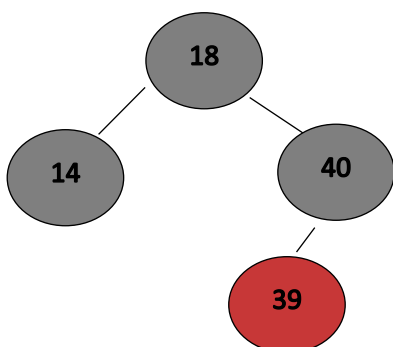
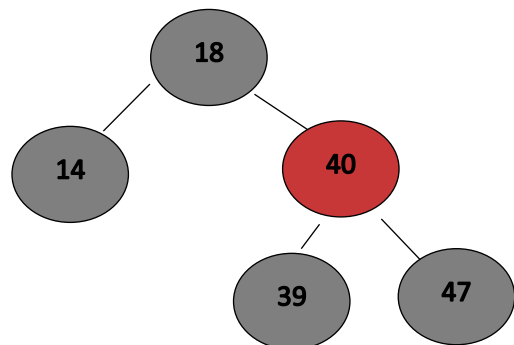
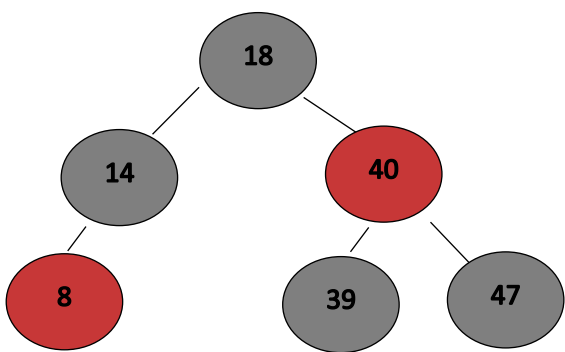
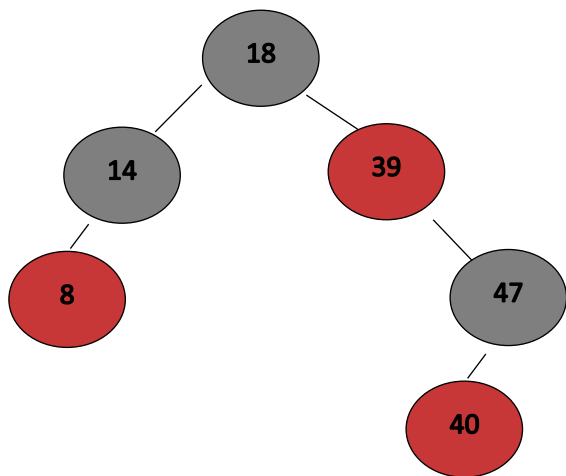
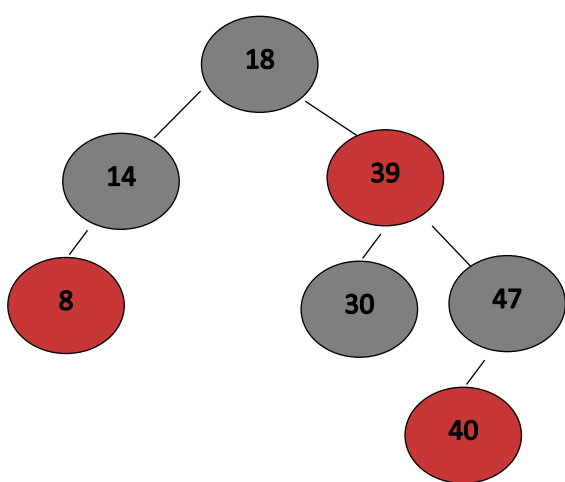


## 2 – Red-Black Tree (Insertion 20-30-8-47-39-18-40-14)

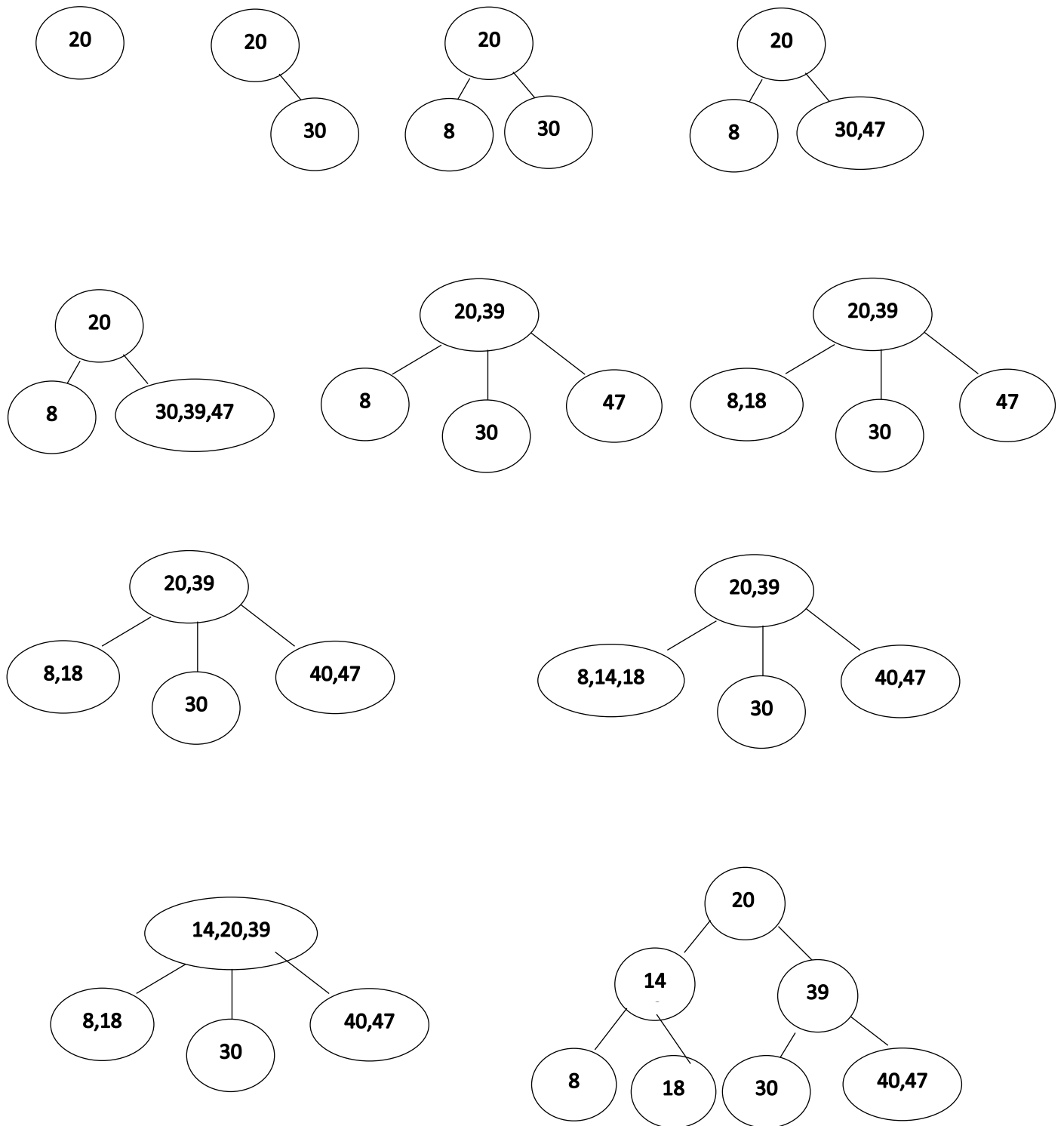




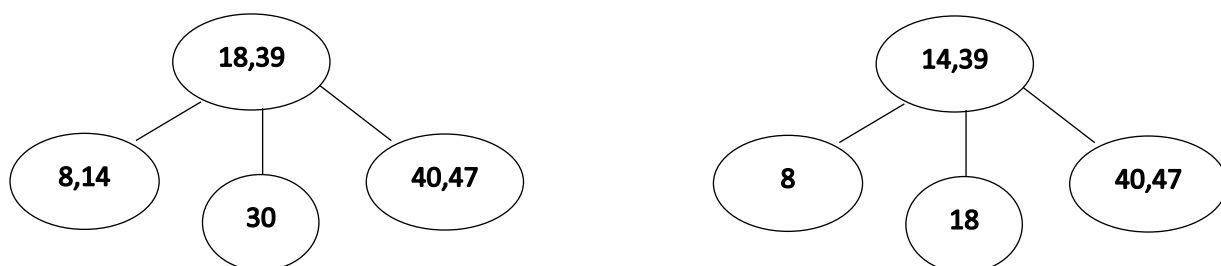
**Red-Black Tree (Removing 20-30-8-47-39-18-40-14)**

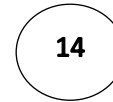
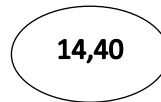
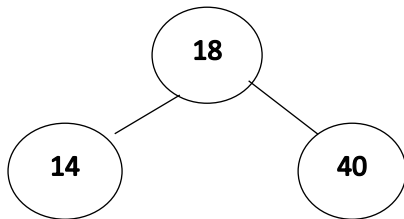
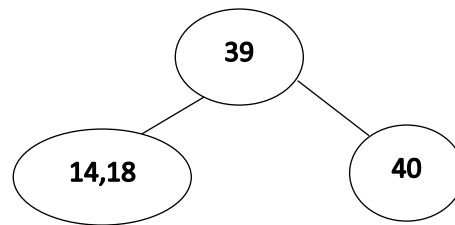
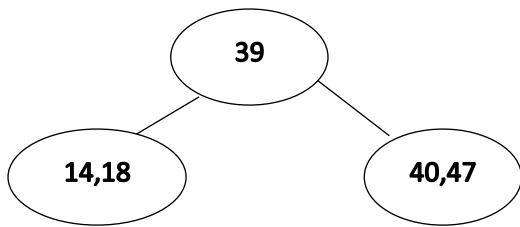


### 3 – 2-3 Tree (Insertion 20-30-8-47-39-18-40-14)

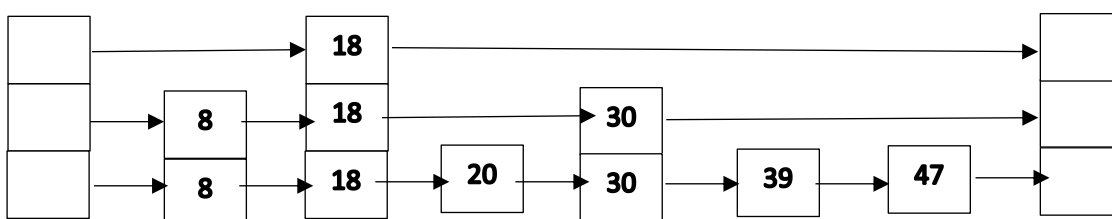
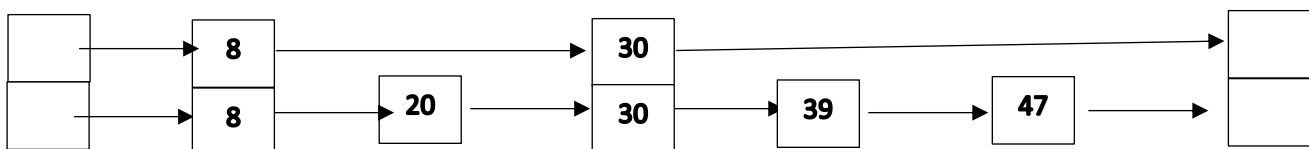
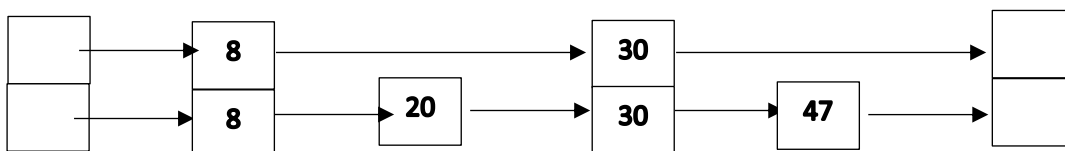
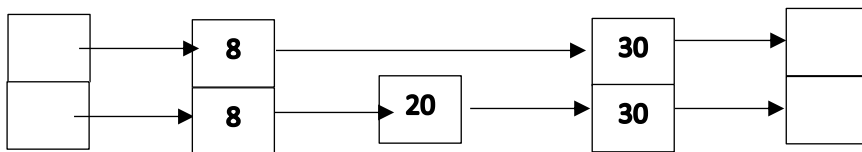
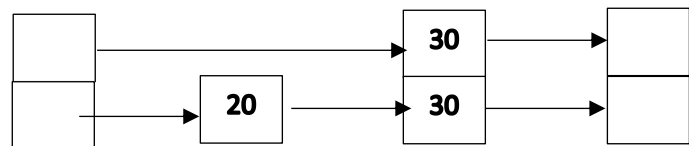
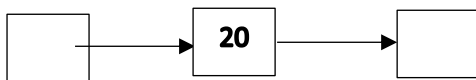


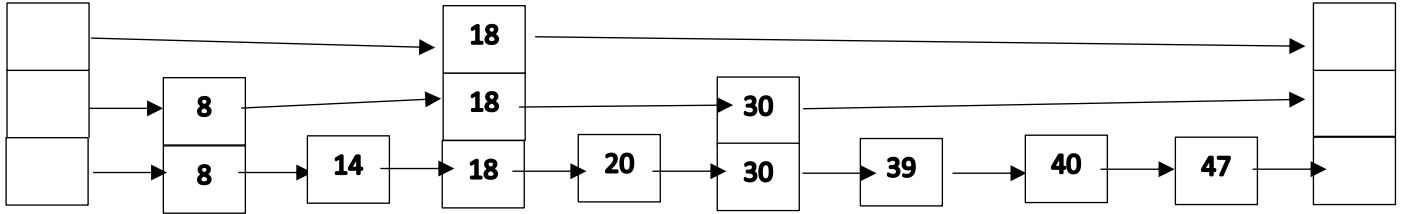
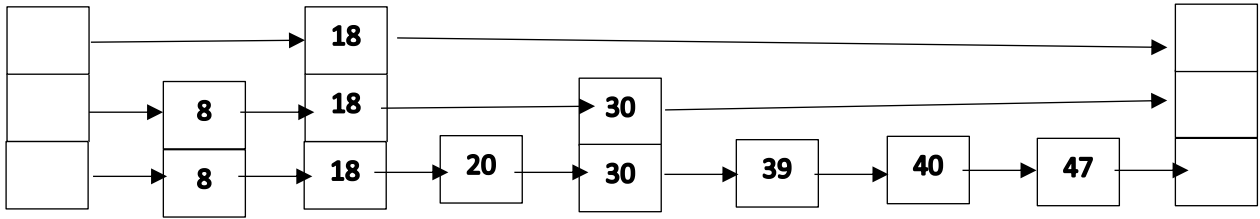
### 2-3 Tree (Removing 20-30-8-47-39-18-40-14)



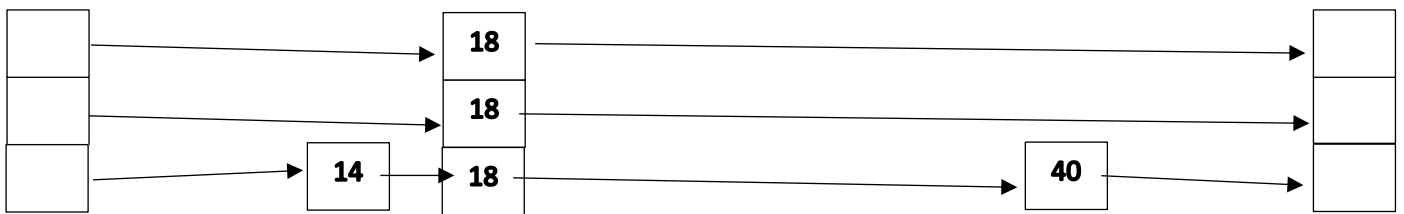
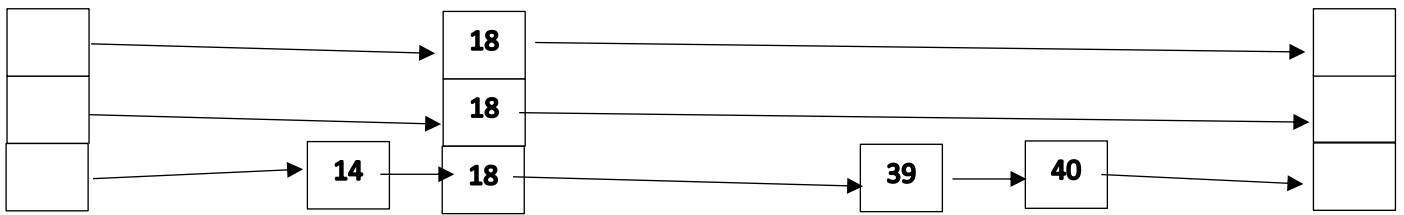
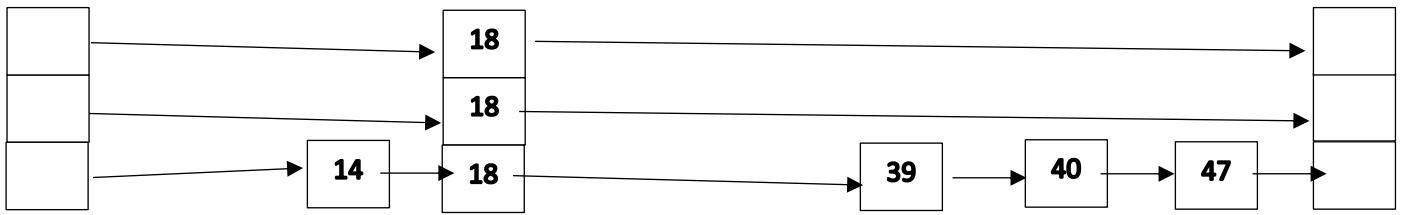
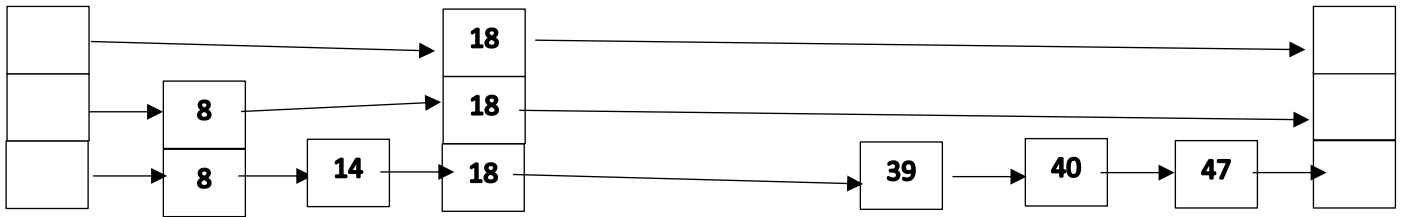
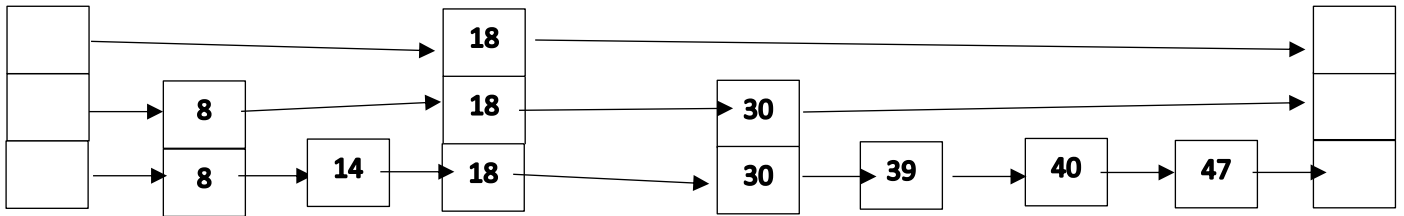


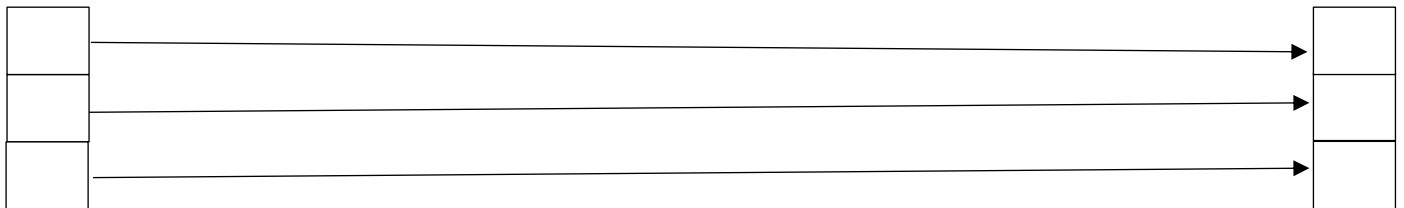
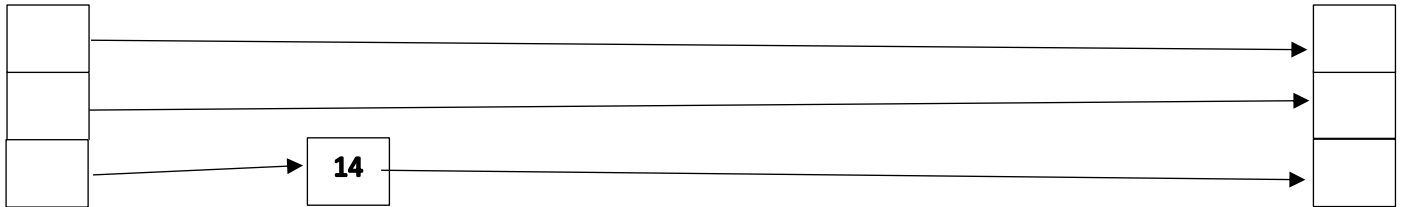
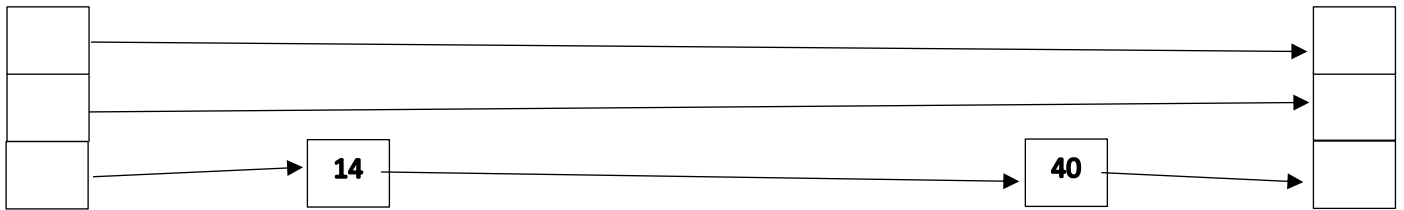
#### 4 – Skip List (Insertion 20-30-8-47-39-18-40-14)



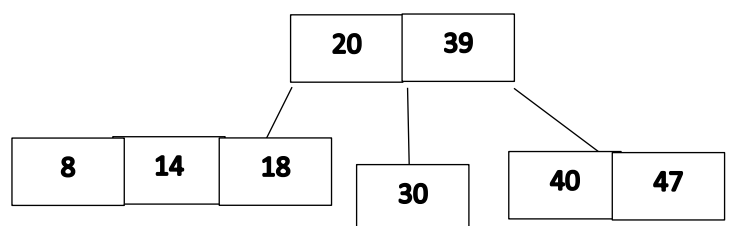
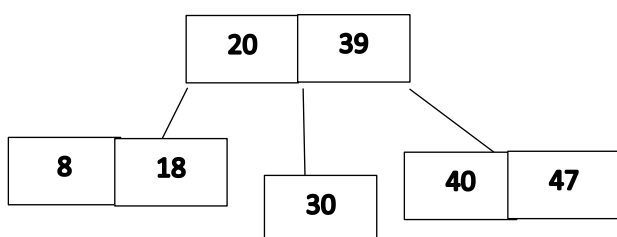
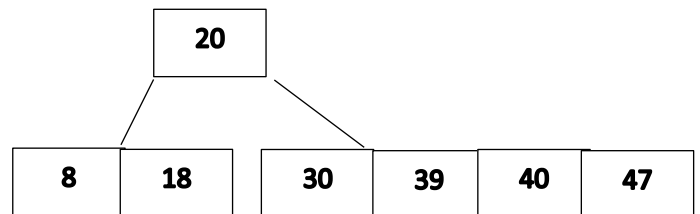
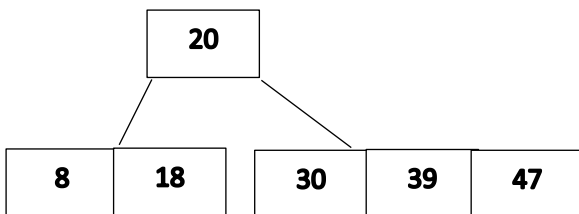
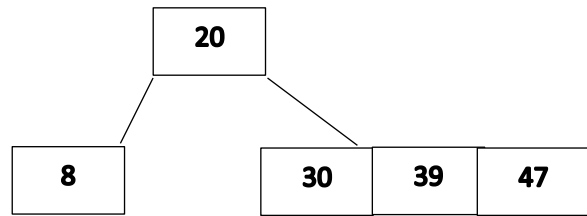
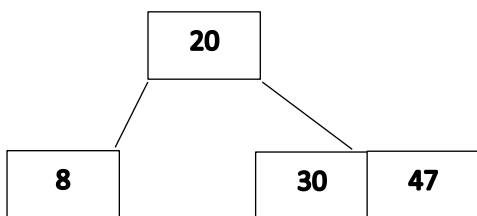
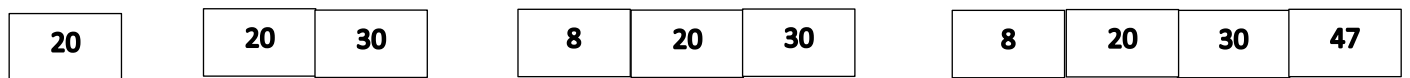


### Skip List (Removing 20-30-8-47-39-18-40-14)





## 5 – B Tree with order 4 (Insertion 20-30-8-47-39-18-40-14)





## B Tree with order 4 (Removing 20-30-8-47-39-18-40-14)

