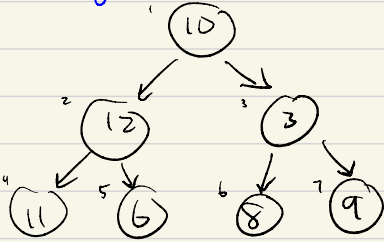
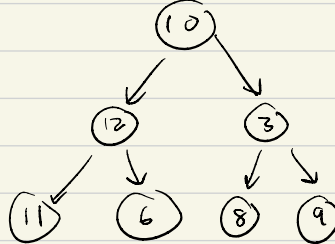


4a) [10, 12, 3, 11, 6, 8, 9]

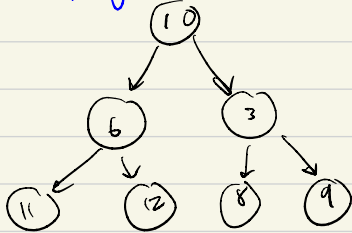
Binary Tree:



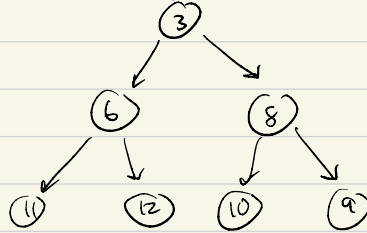
heapify (3)



heapify (2)



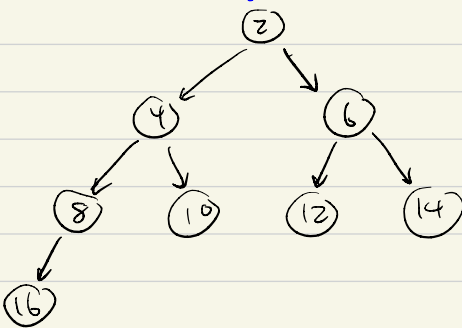
heapify (1)



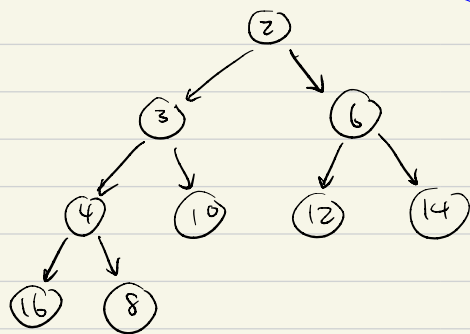
[3, 6, 8, 9, 10, 11, 12]

4b) [2, 4, 6, 8, 10, 12, 14, 16]

Initial Configuration:



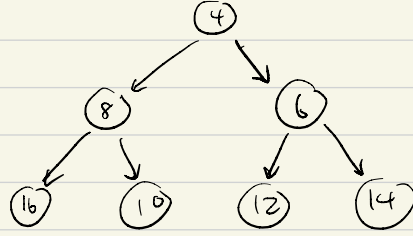
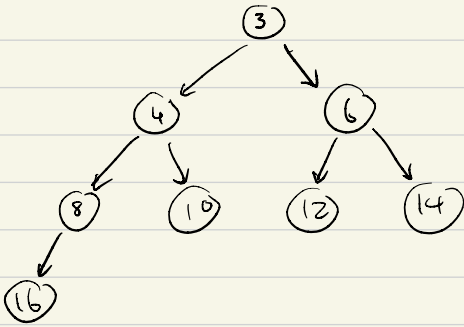
Insert 3:



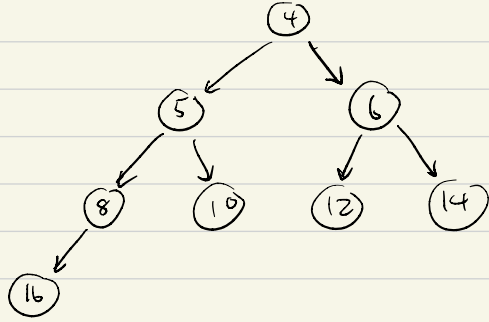


Pop (top element)

Pop (top element)



Insert 5



Pretend comp is less than
< (min heap)