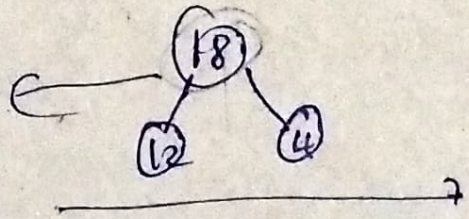
Heap and Heap sort :

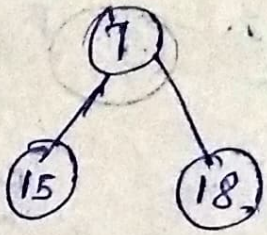
> It is a complete binary tree or almost complete binary tree.

> Every parent node is greater than or lesser than its child nodes.

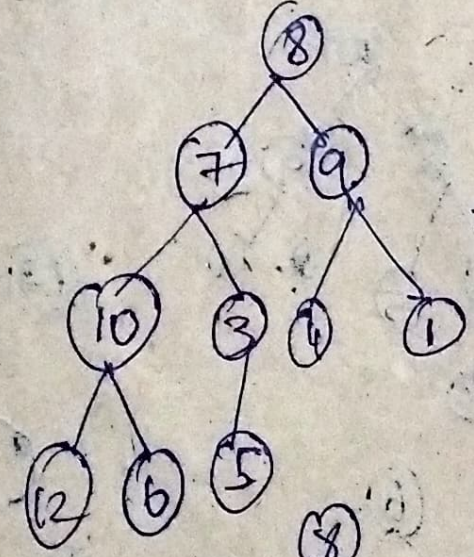
Max heap :

Min heap :



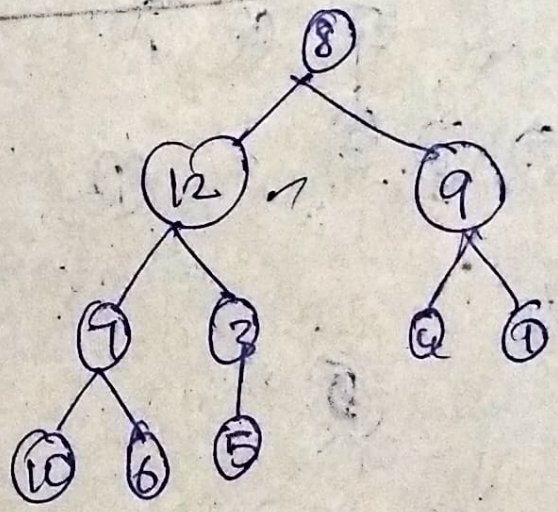


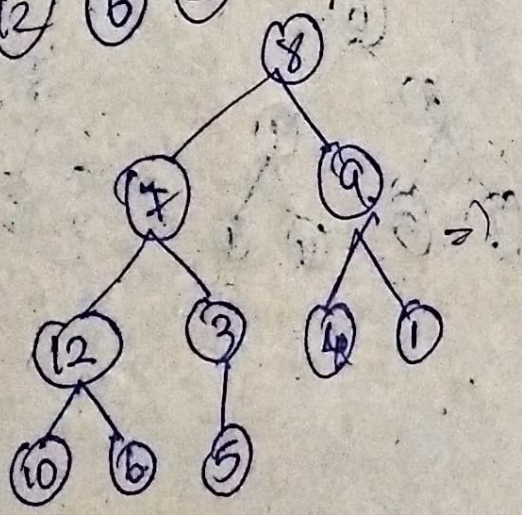
(a) 8, 7, 9, 10, 3, 4, 1, 12, 6, 5.

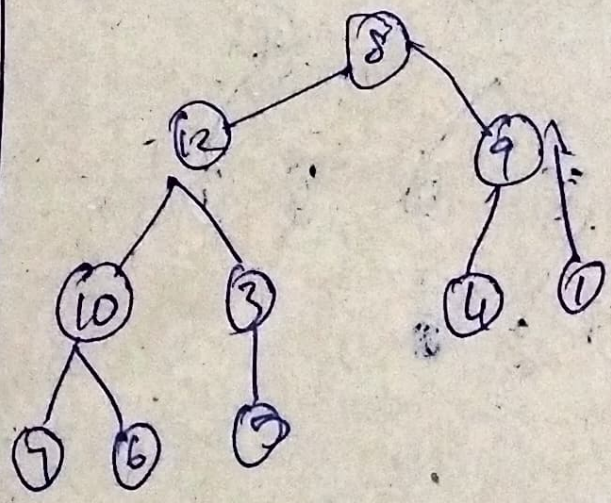


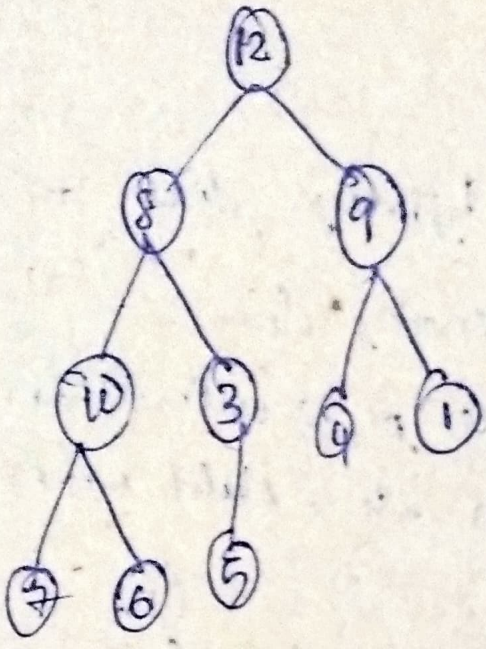
⇒ order.

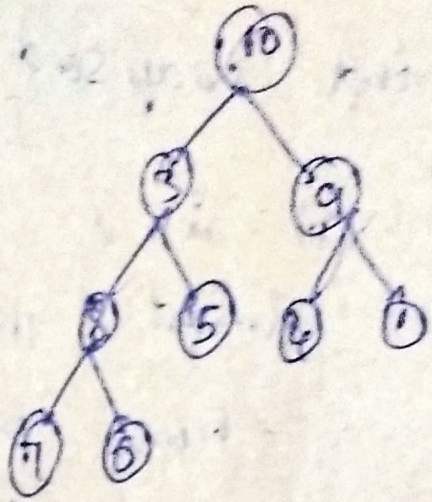
Max heap

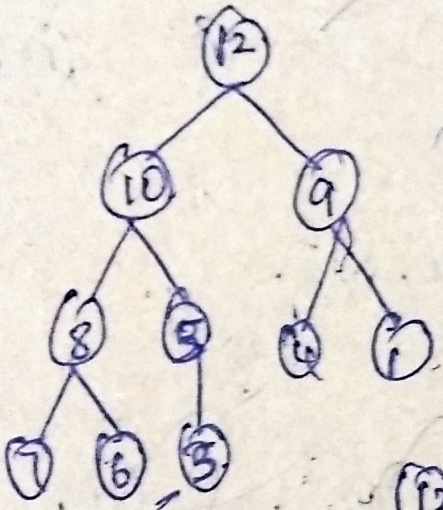




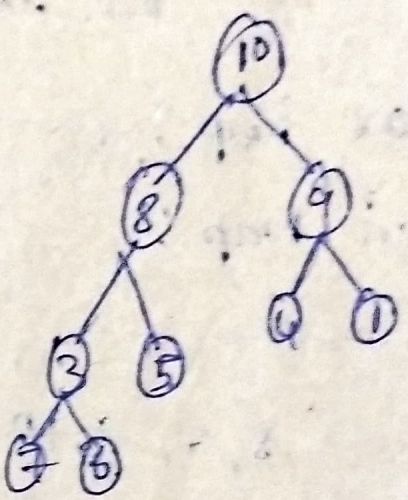




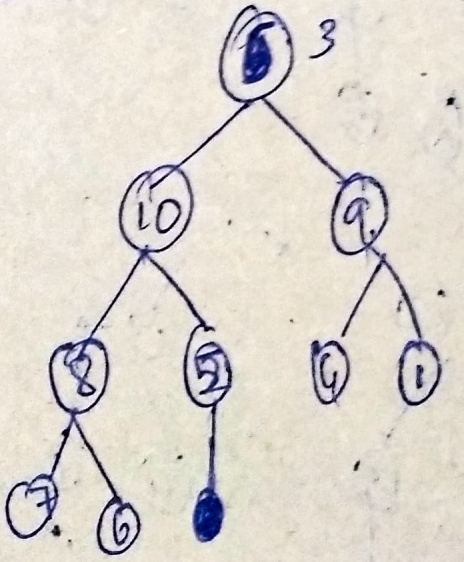


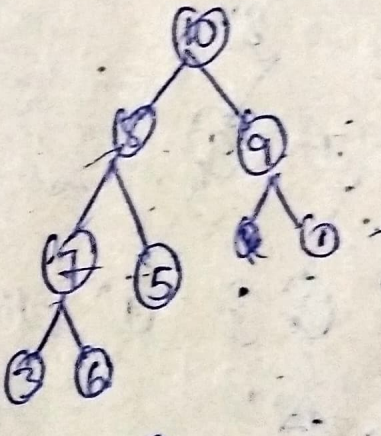


(12)

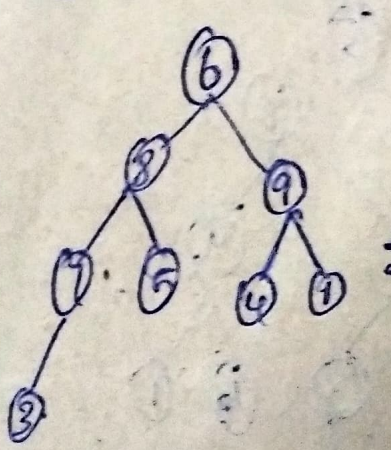


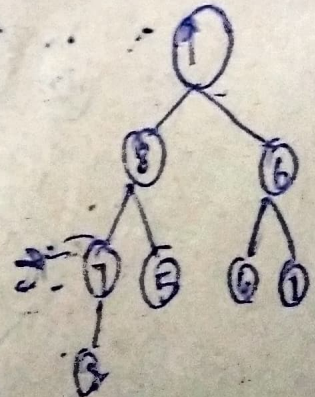
Delete.



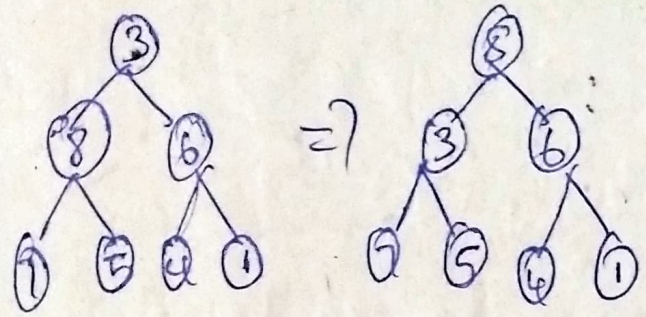


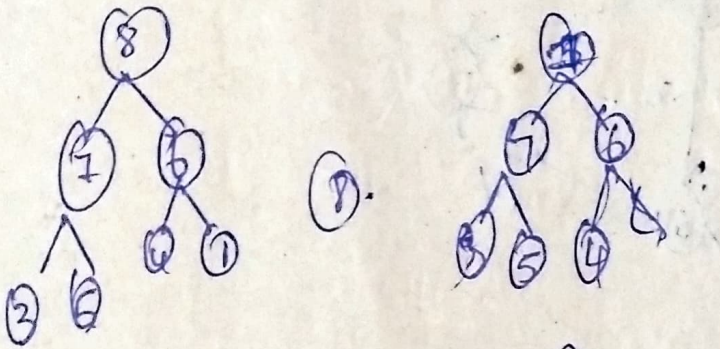
(10)

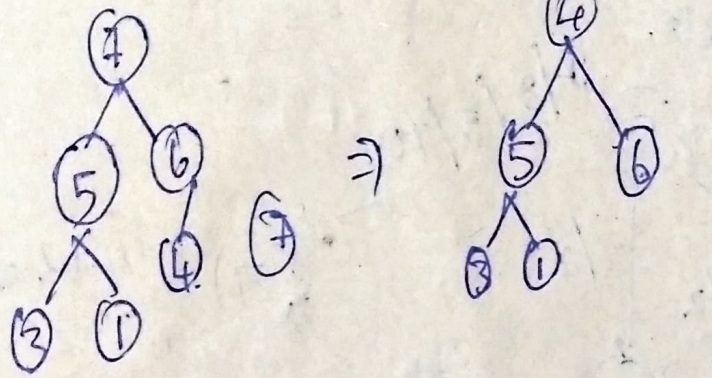


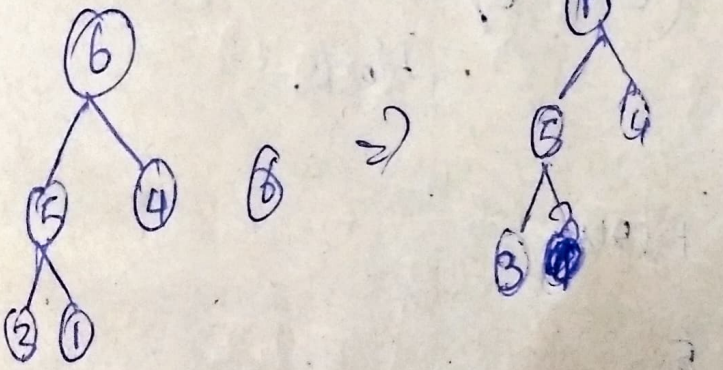


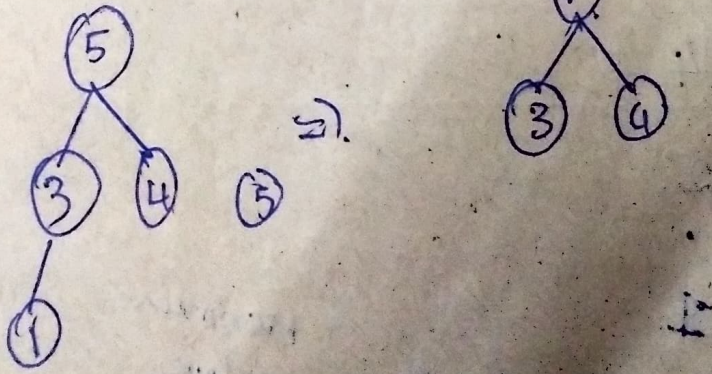
(9)

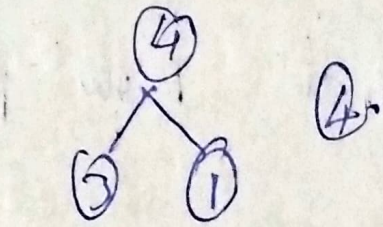


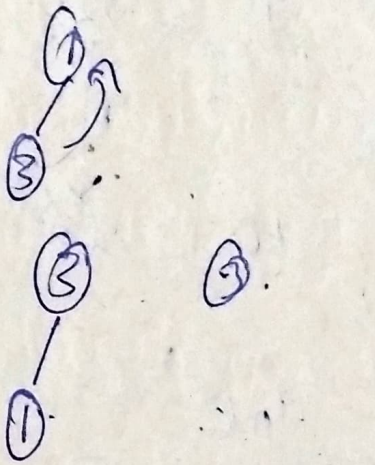


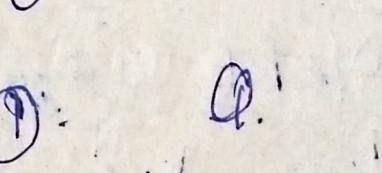












12, 10, 9, 8, 7, 6, 5, 4, 3, 1.

@2, 8, 7, 9, 10, 3, 4, 1, 12, 6, 5.

Descending order

12, 10, 9, 8, 7, 6, 5, 4, 3, 1.

T. con → O(nlogn).

Spa → θ(1).