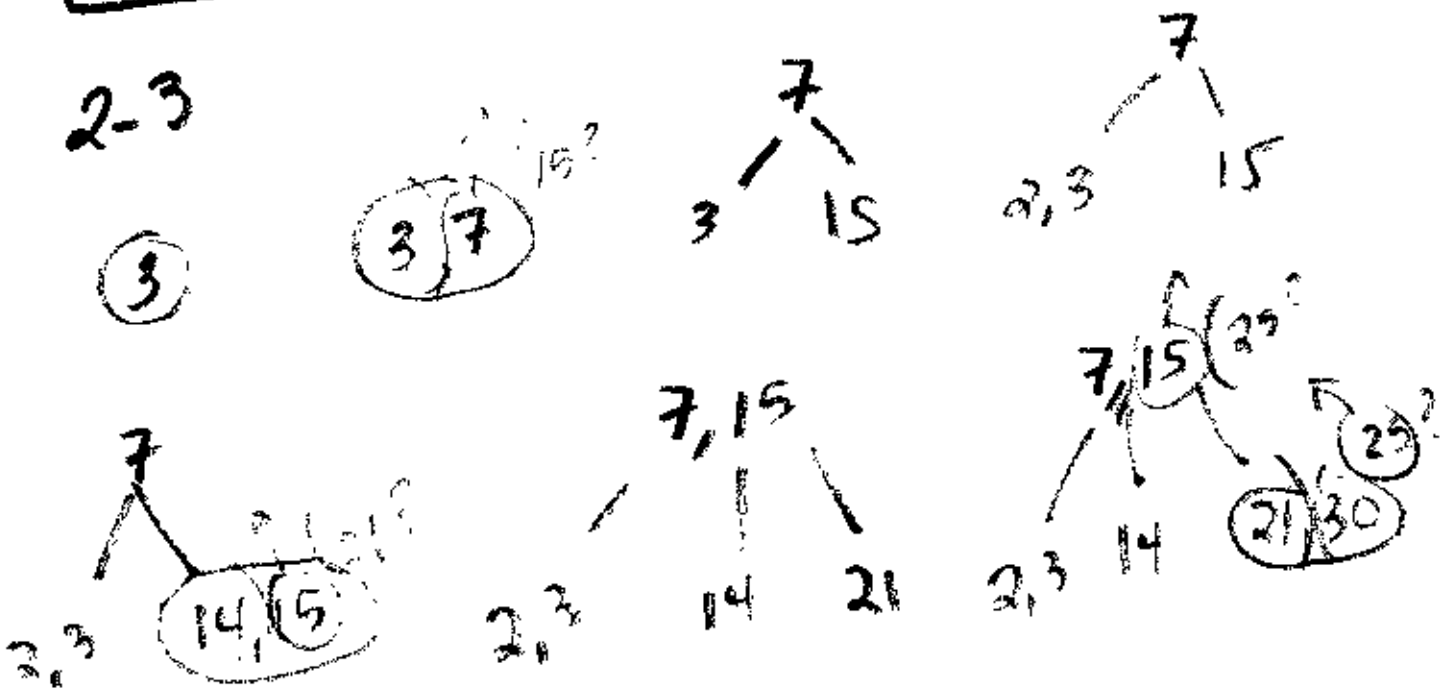
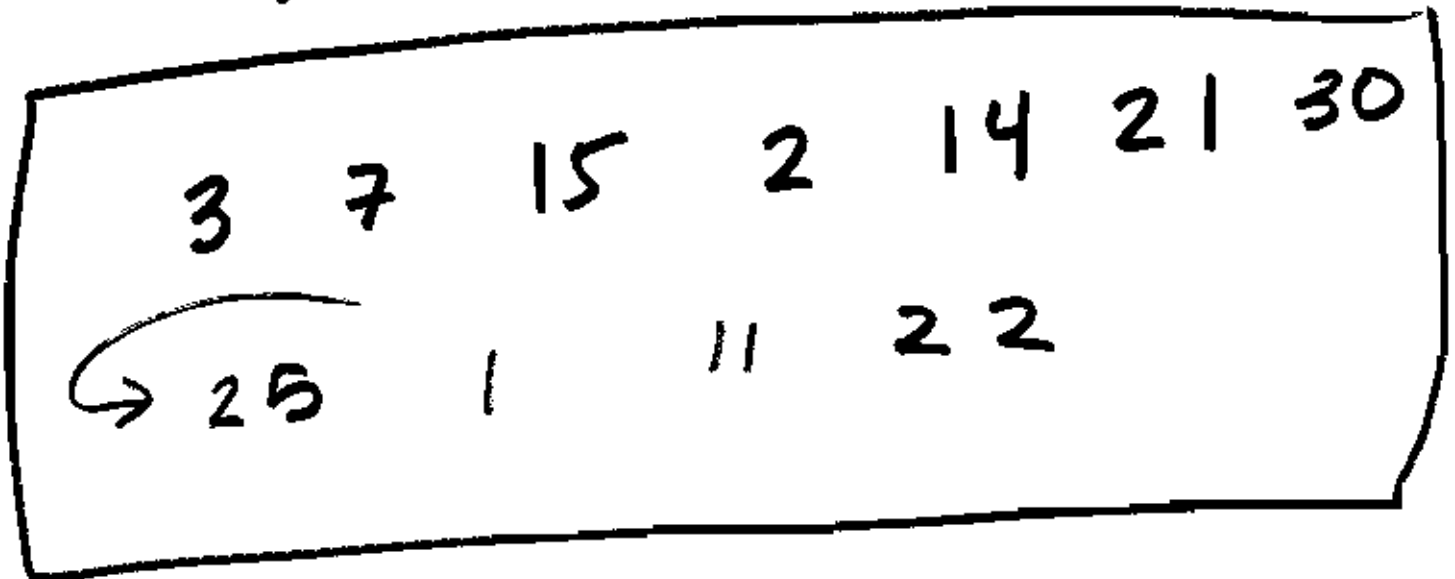
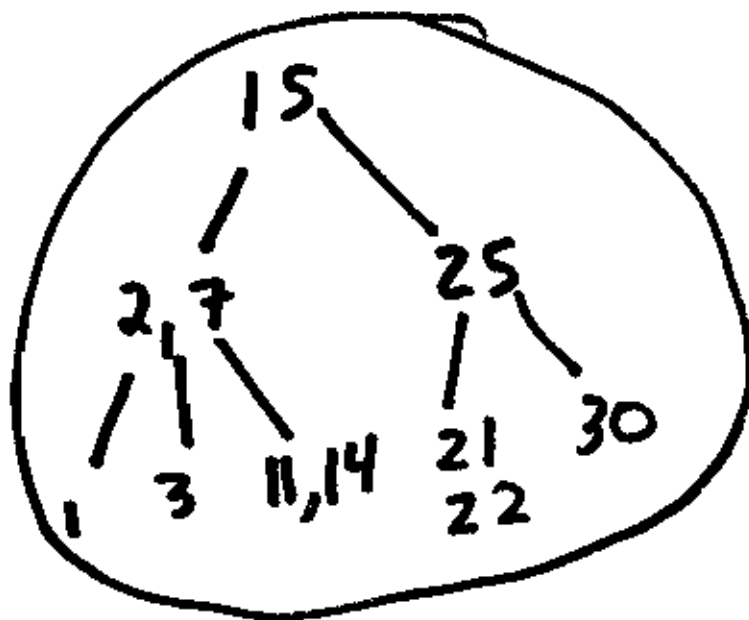
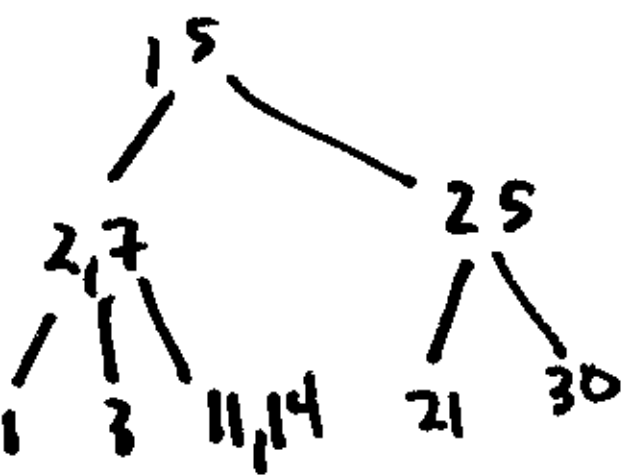
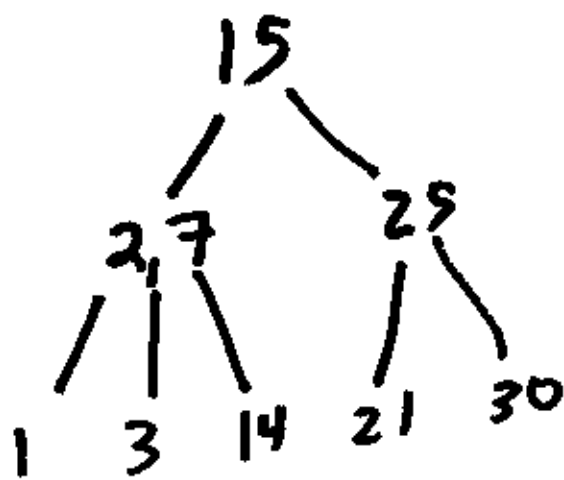
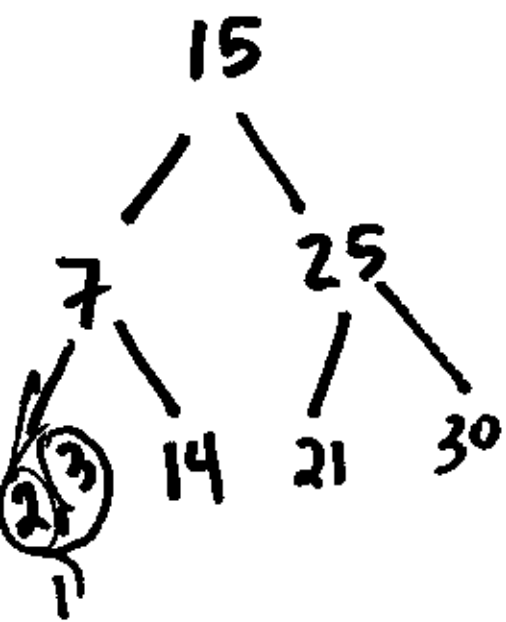


Assignment (ungraded)

2-3, 2-3-4, red black, AVL



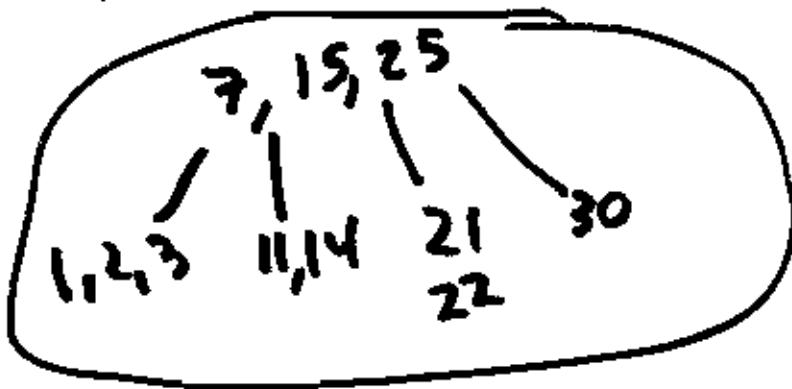
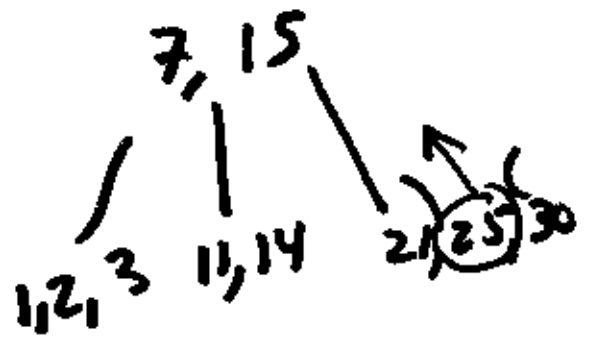
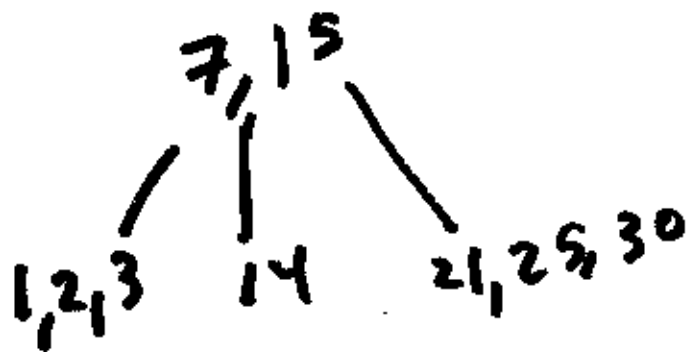
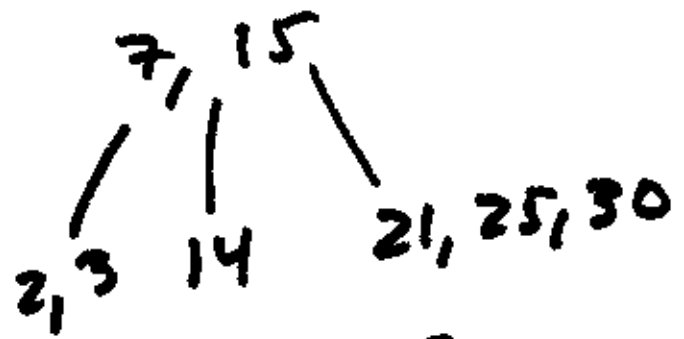
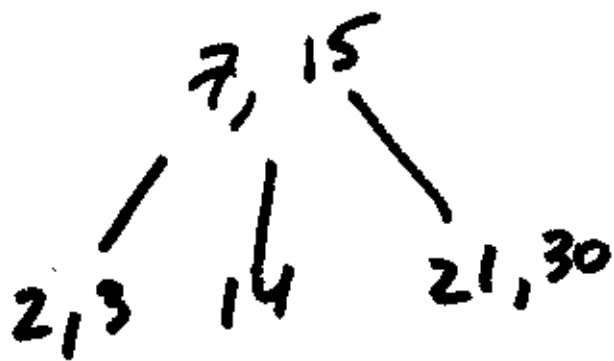
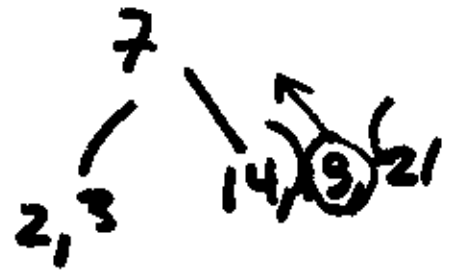
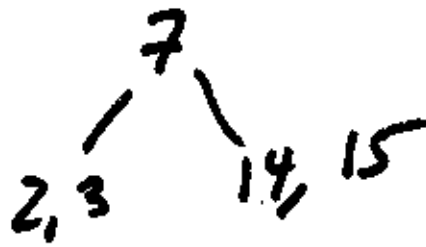
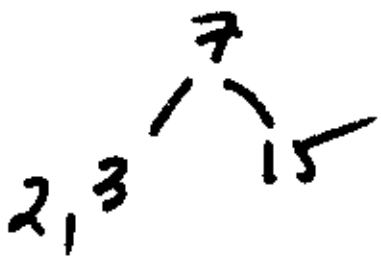


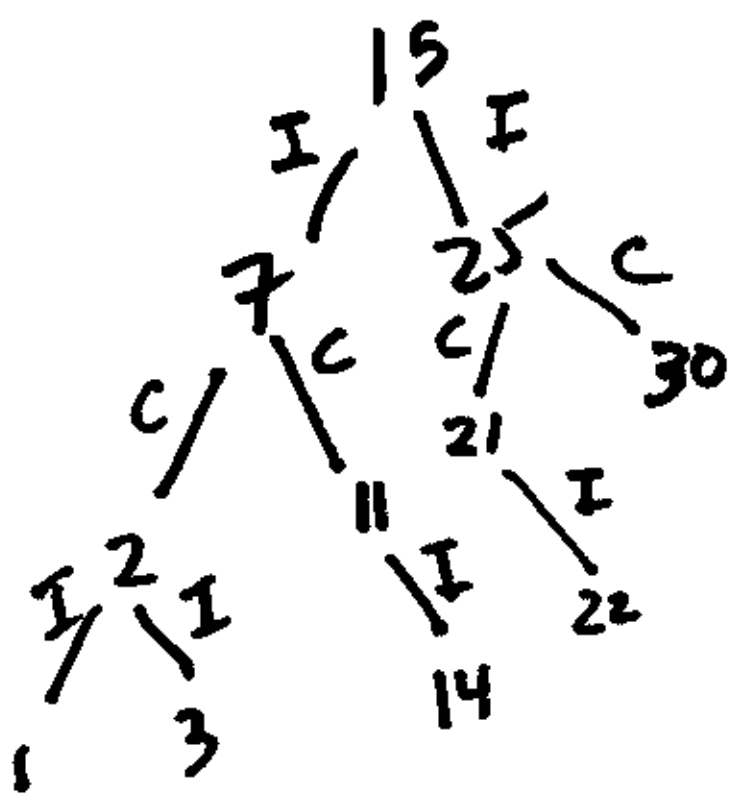
2-3-4

3

3, 7

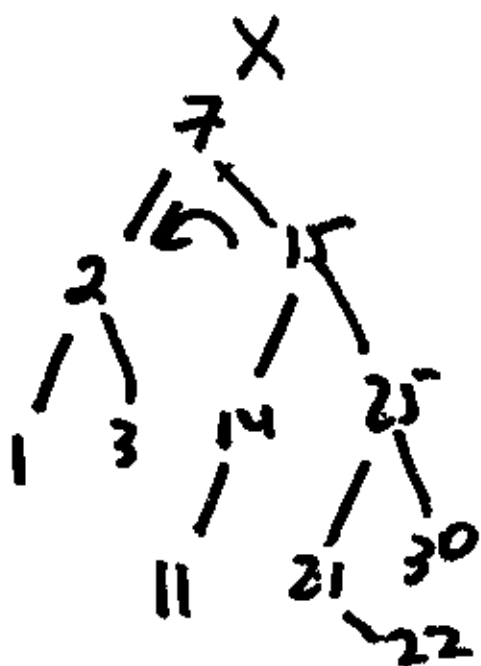
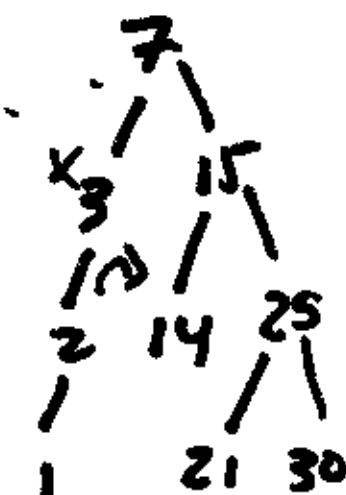
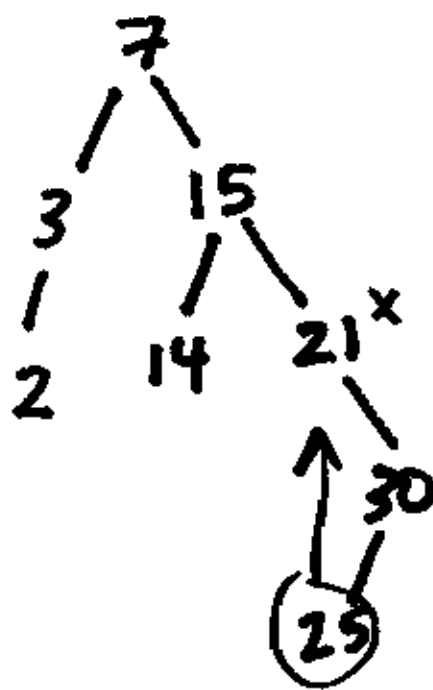
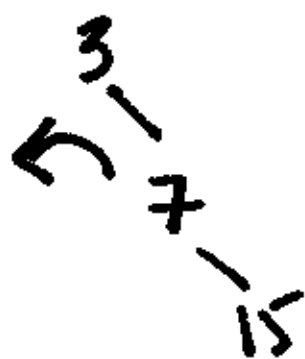
3, 7, 15

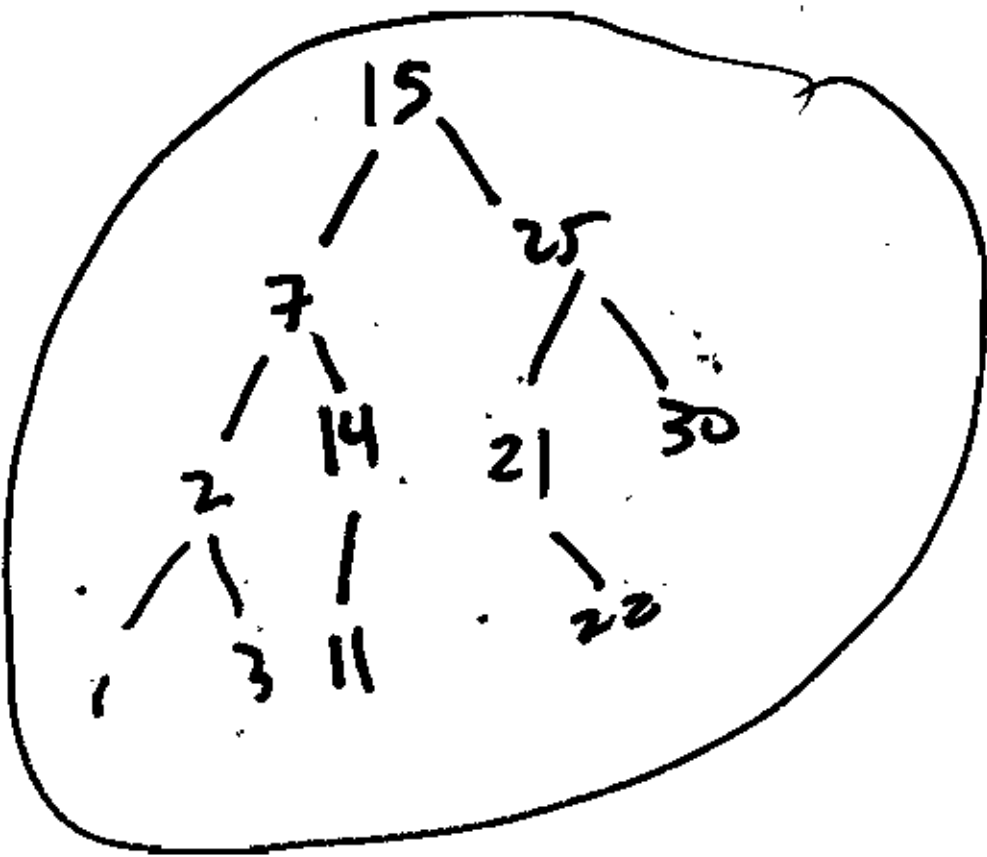




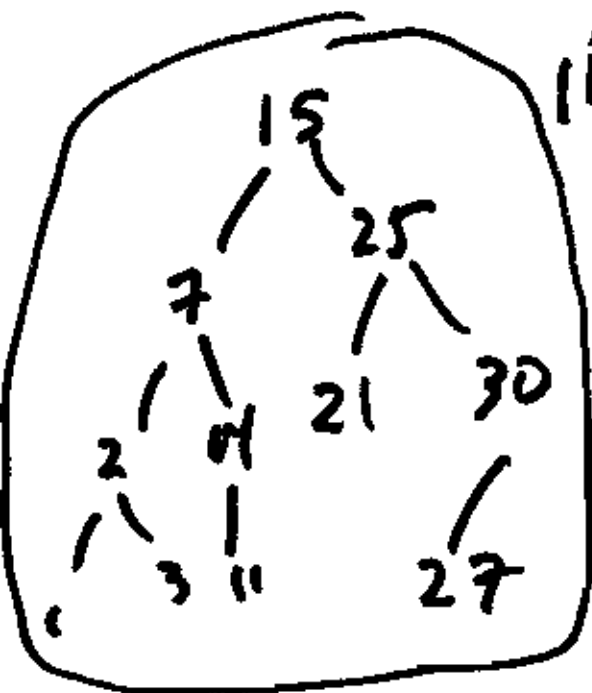
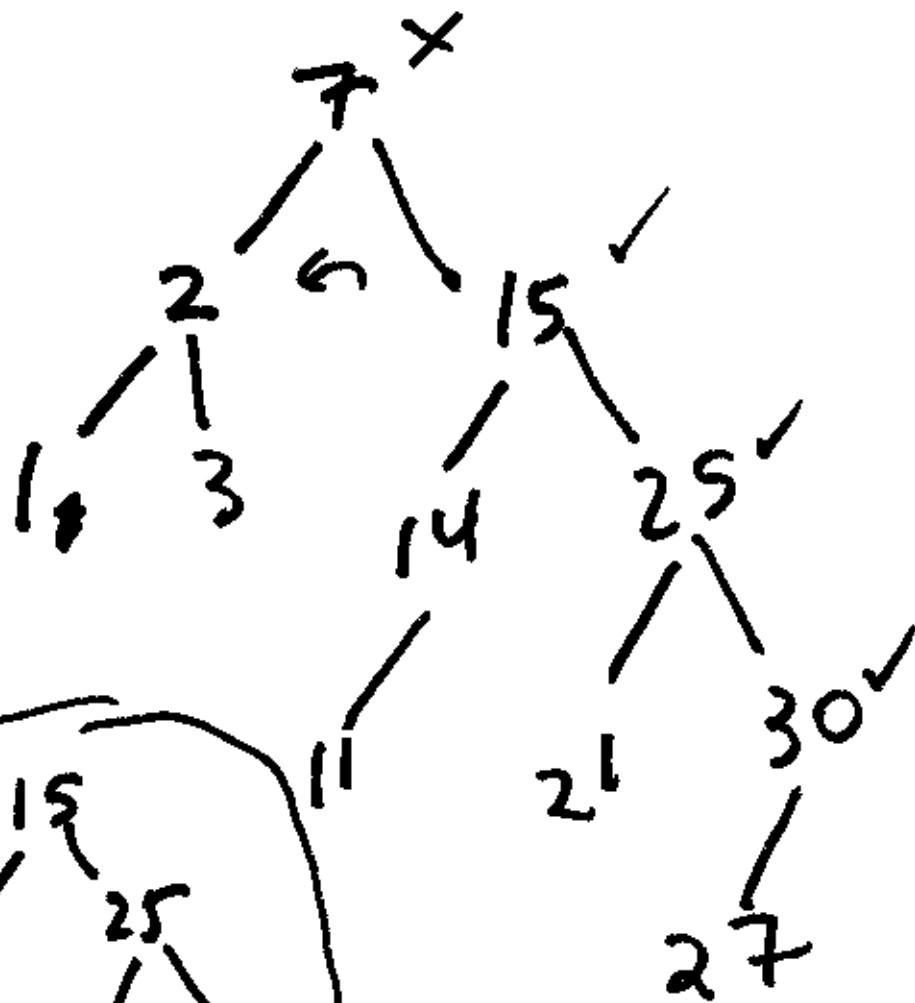
Red-Black

AVL:



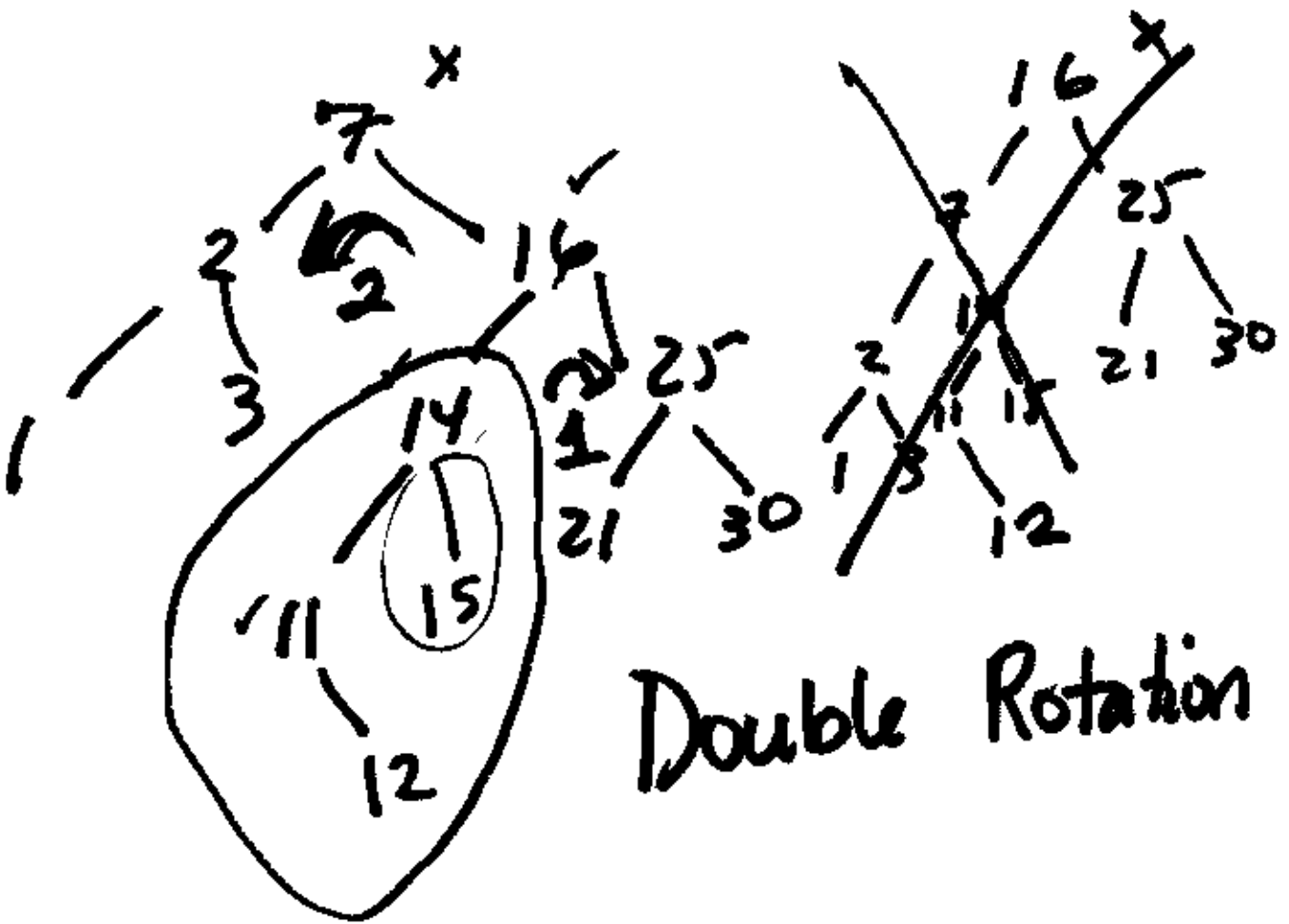


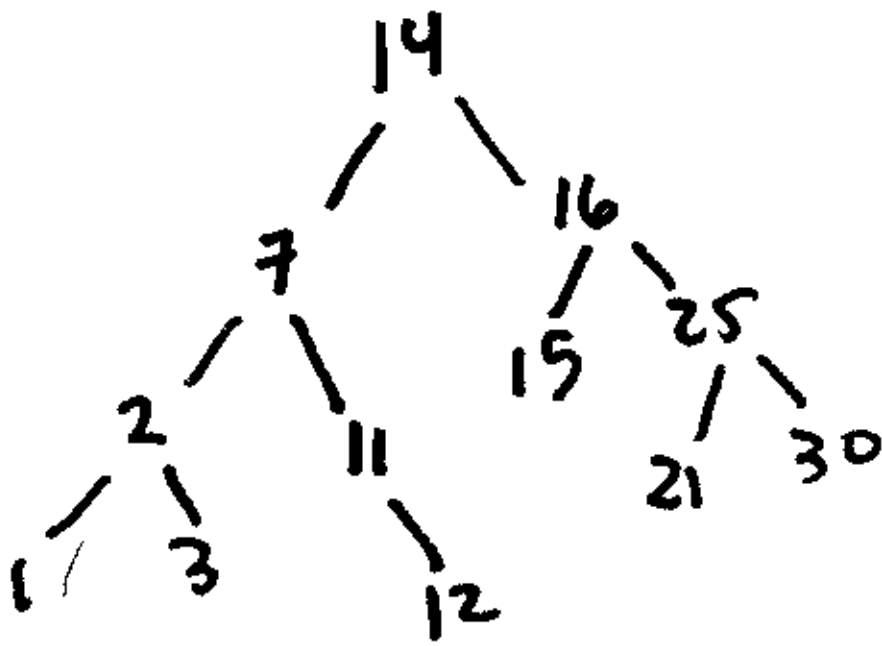
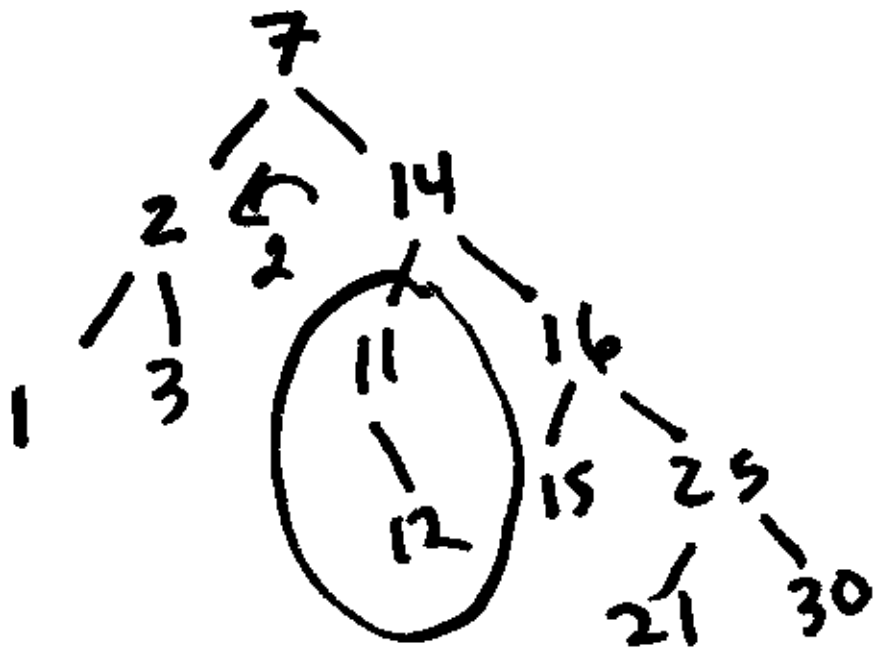
What if instead of 22,
we added 27



Replace 15
Add.

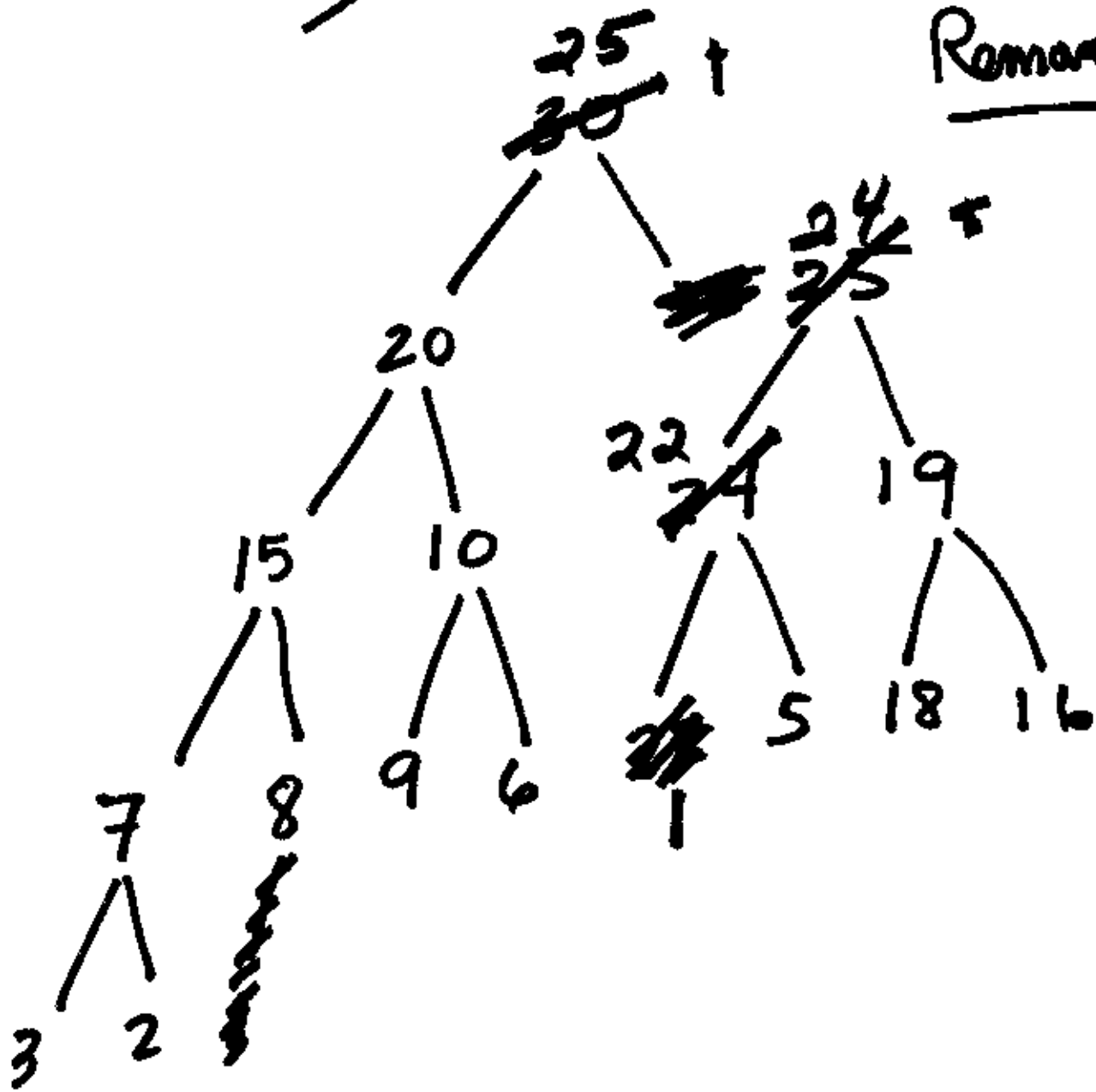
3, 7, 16, 2, 14, 21, 30,
25, 1, 11, ~~15~~, 12





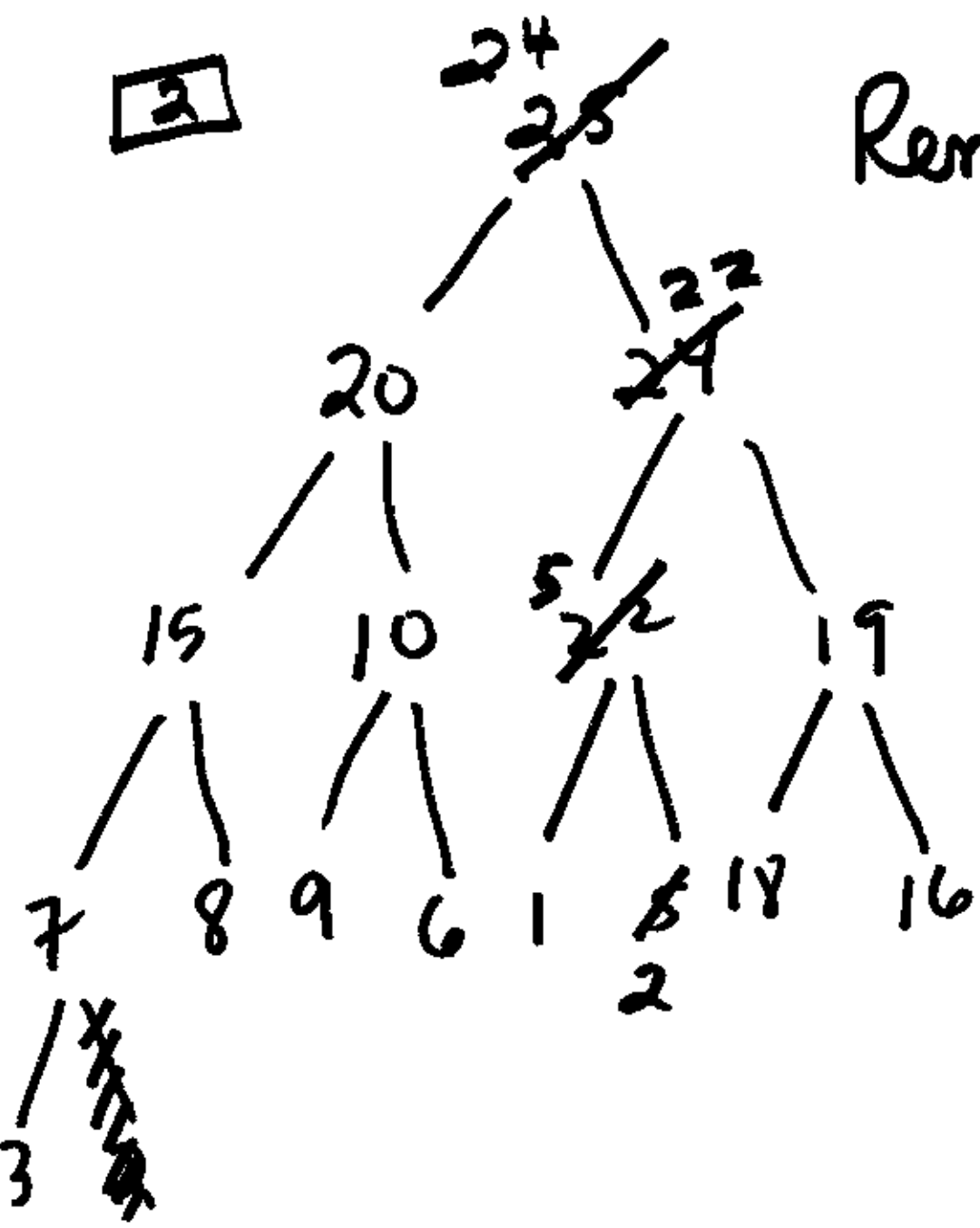
Heaps

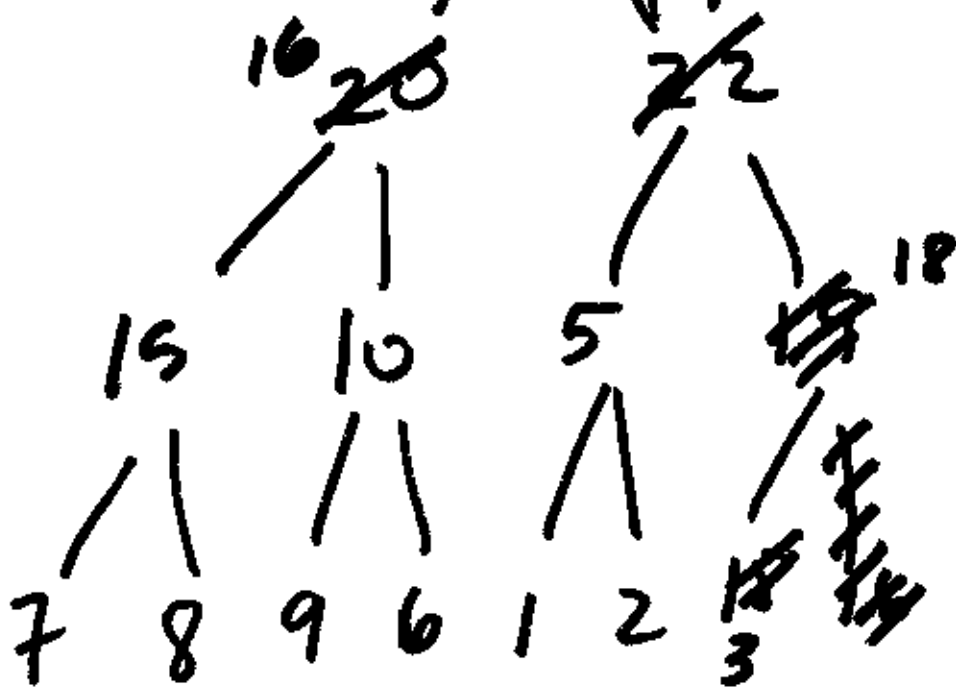
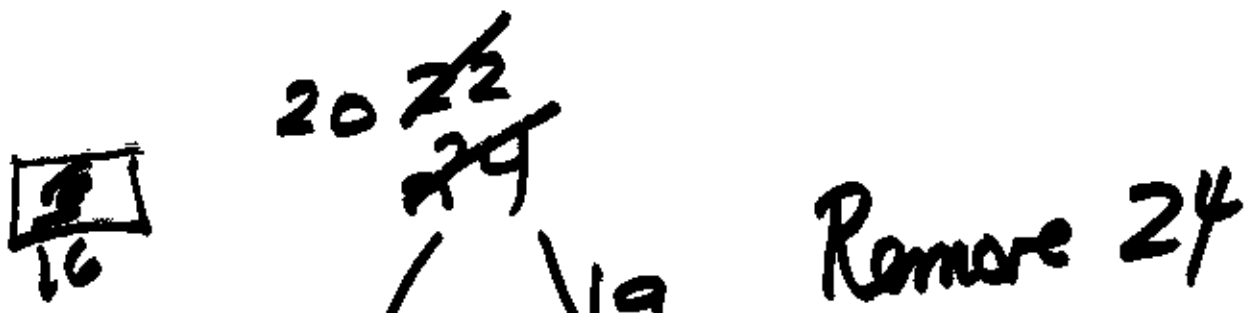
Remove 30



2

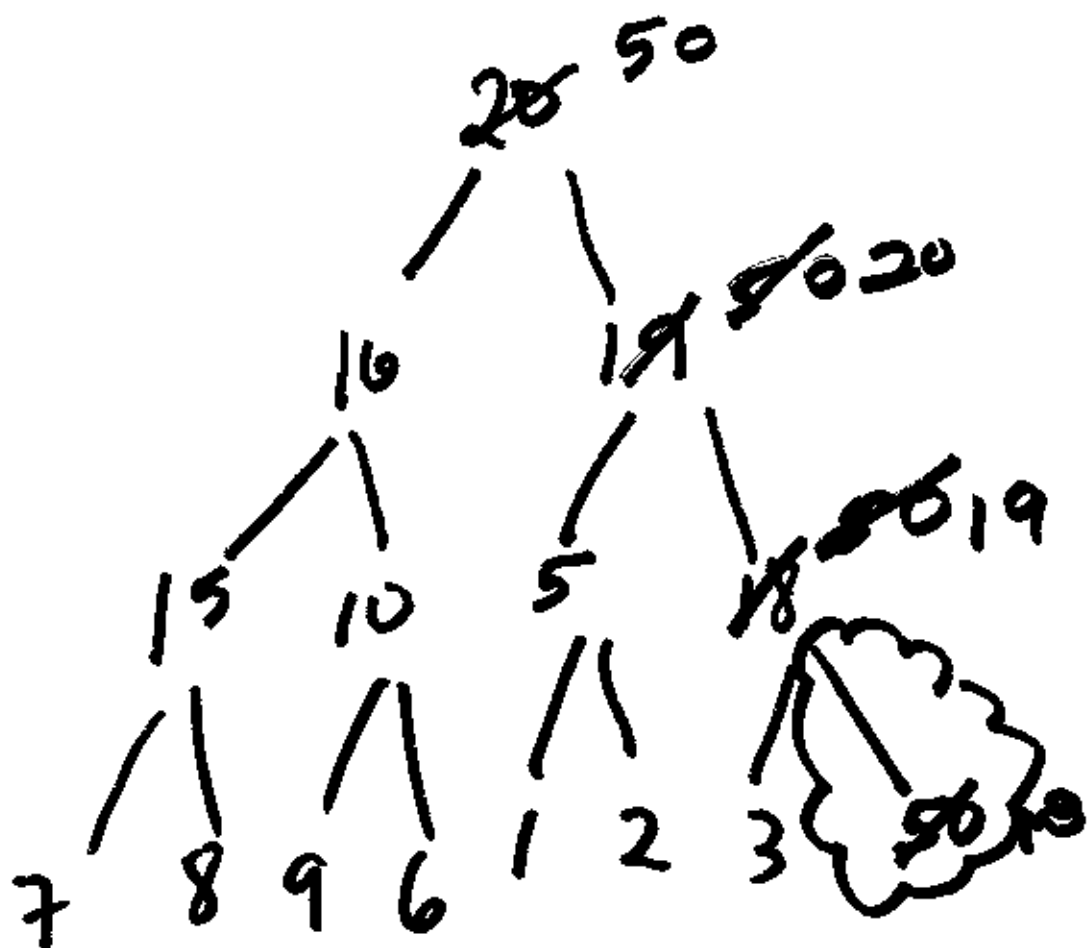
Remove 25





Remove 22

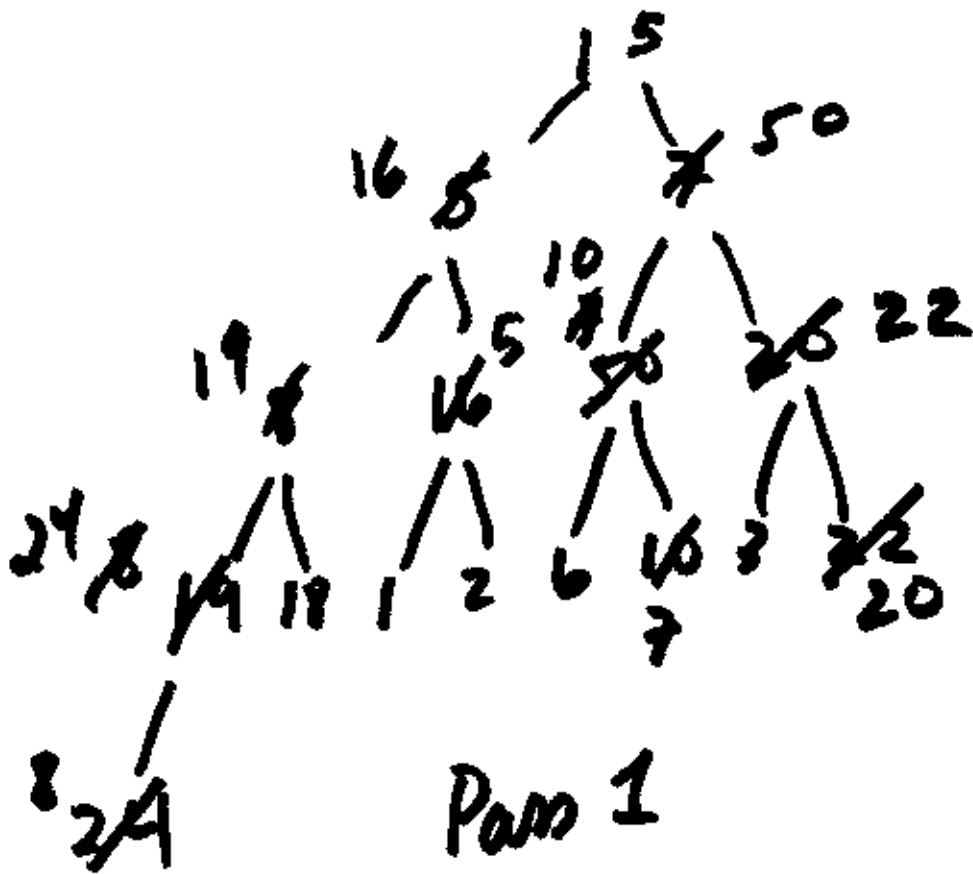
~~15~~

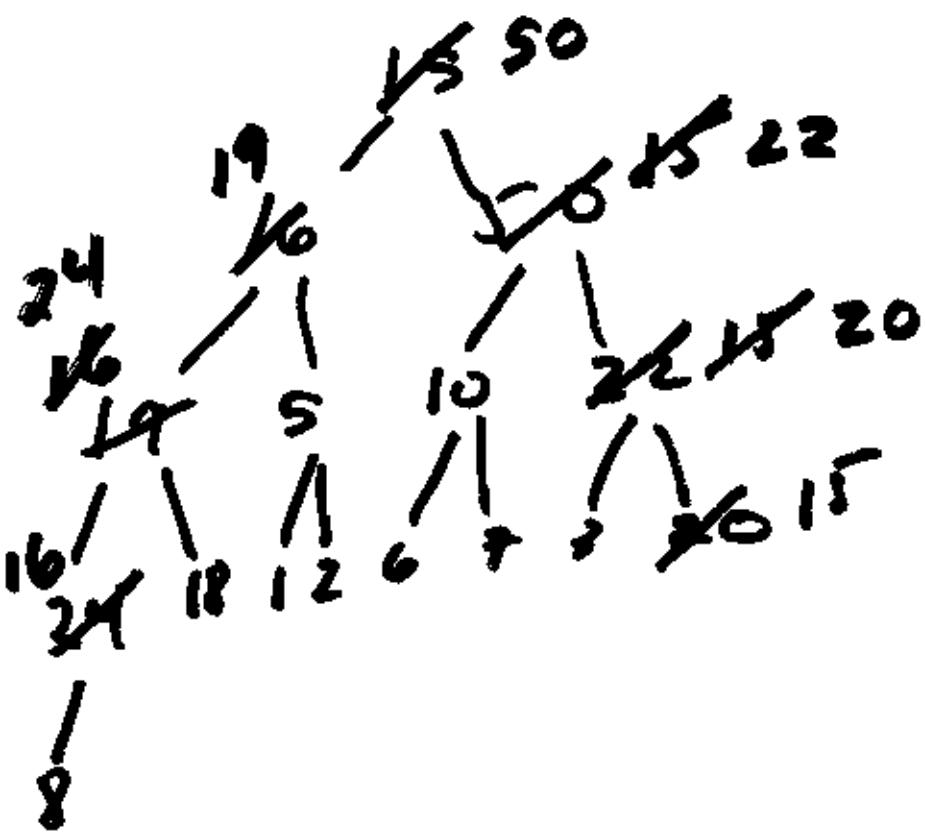


Add 50

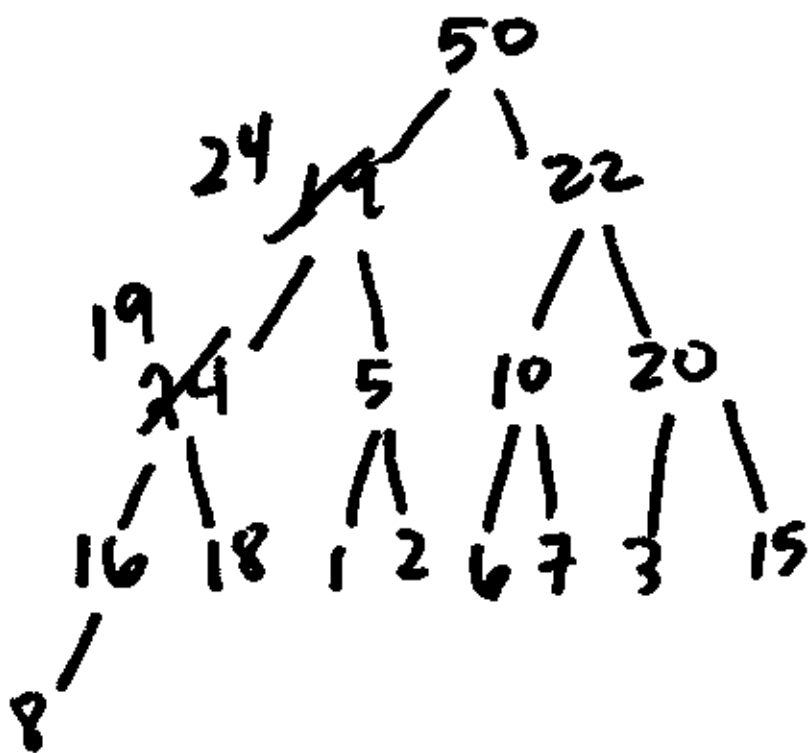
Heap Sort

15 5 7 8 16 50 20
 19 18 1 2 6 10 3
 22 24





Pass 2

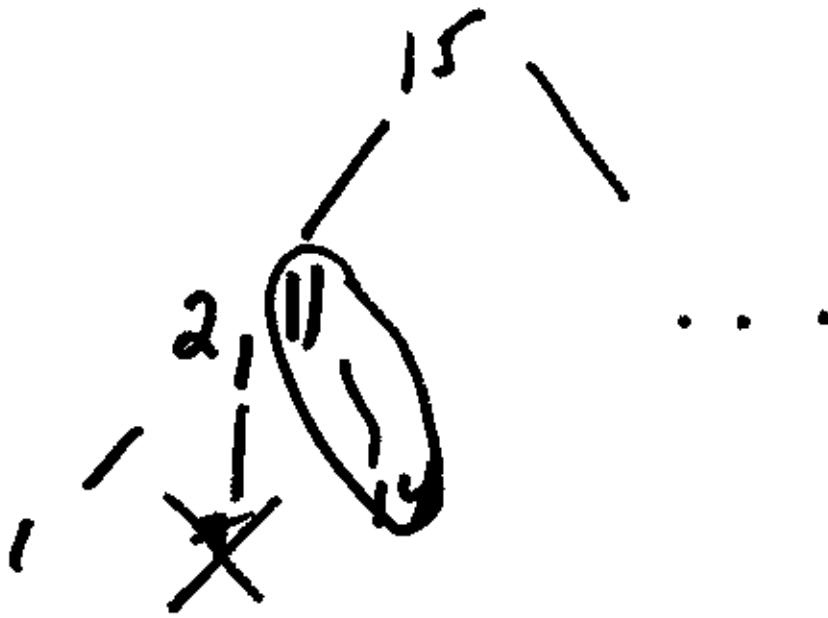
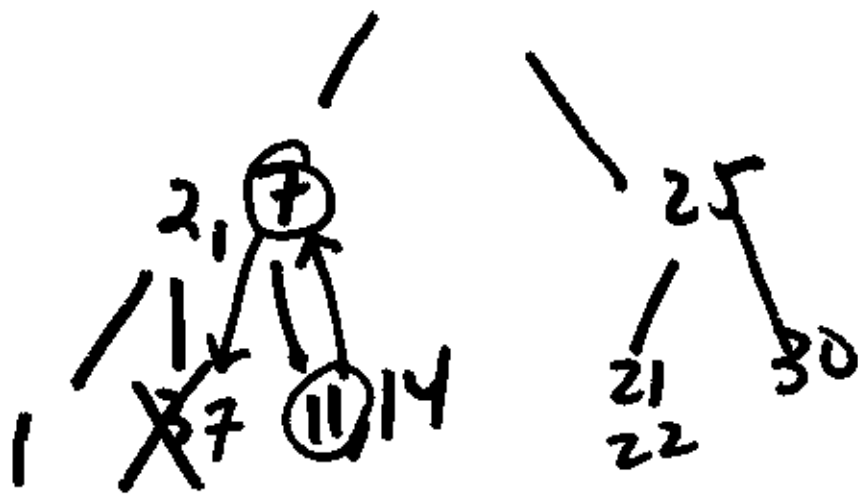


Pass 3

Remove 3

15

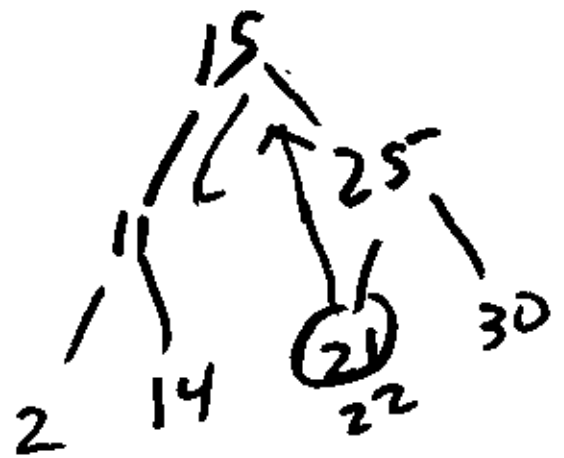
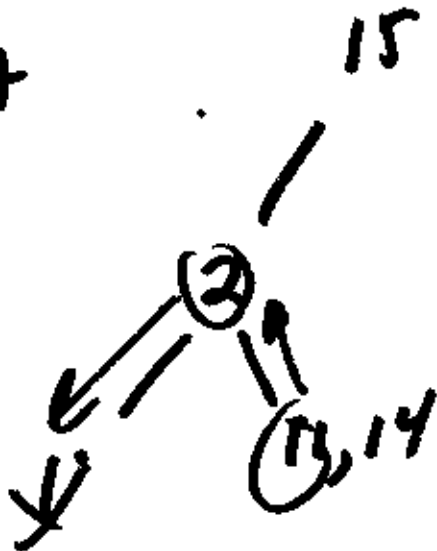
2-3 Tree Removal



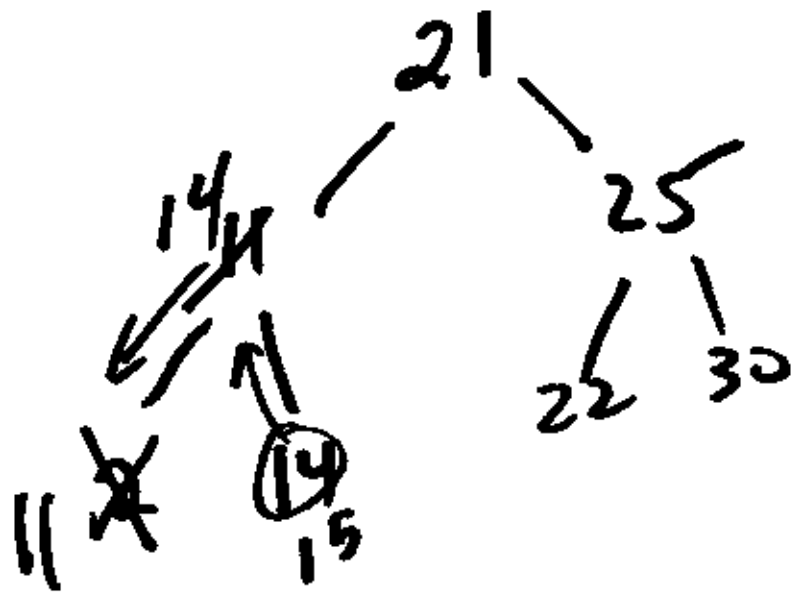
Remove 7

15

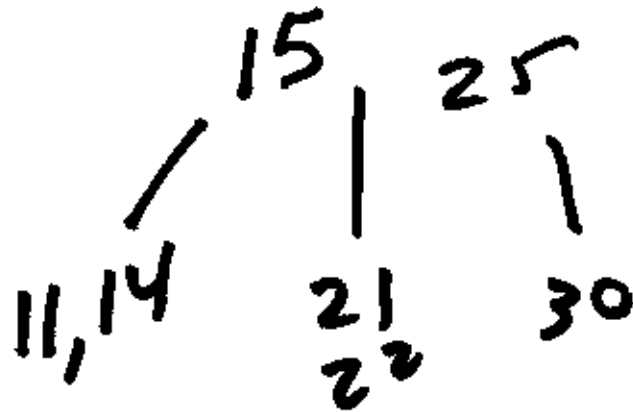
Delete 11



Delete 2



Delete 11



2-3-4

Removal

