

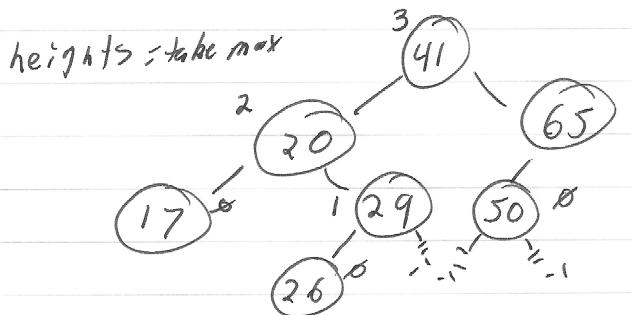
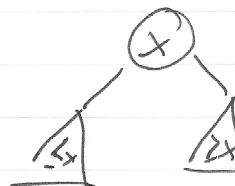
Lecture 6 : AVL Trees, AVL Sort

Today : Balanced BSTs

- the importance of being balanced
- AVL Trees
 - definition
 - rotations
 - insert
- Other balanced trees
- data structures in general
- lower bounds

Recall : Binary Search Trees (BSTs)

- rooted binary tree
- each node has
 - key
 - left pointer (child)
 - right pointer (child)
 - parent pointer
- BST Property :



In order traversal algo in CLRS

BSTs support insert, delete, min, max
 next bigger, next smaller (successor/predecessor)
 in $O(h)$ time
 $h = \text{height of BST}$