

CSE 332 AVL Worksheet

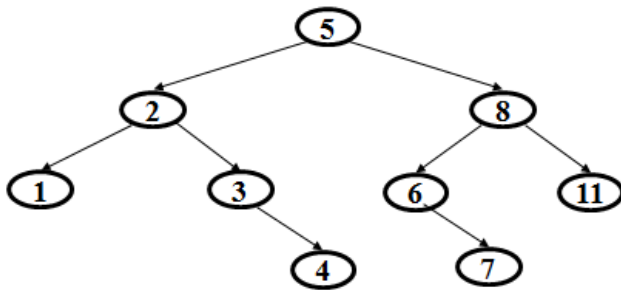
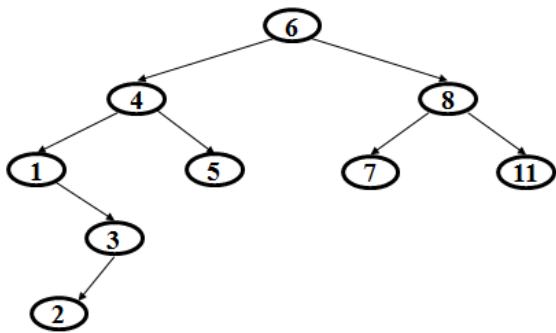
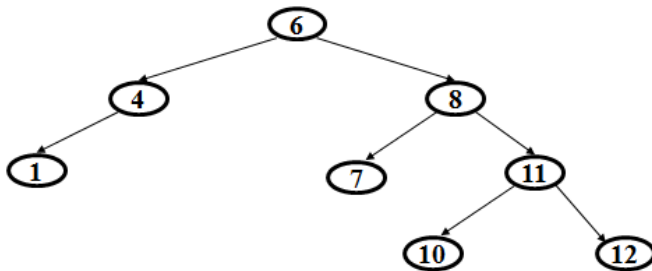
The AVL Balance Condition:

Left and right subtrees of every node have heights **differing by at most 1**

Ensures small depth: We will show that an AVL tree of height h must have a lot of nodes (**roughly** 2^h)

Note: height of a null tree is -1, height of tree with a single node is 0

Which of these are AVL Trees?



Let $S(h)$ be the minimum # of nodes in an AVL tree of height h , then:

$$S(h) = S(h-1) + S(h-2) + 1$$

where $S(-1) = 0$ and $S(0) = 1$

h

Min height Tree

$S(h)$