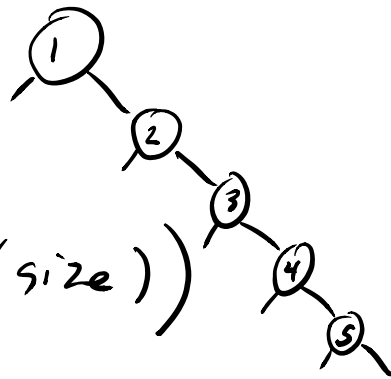


Big-O size height

insert	remove	get	update	traverse
$O(H)$	$O(H)$	$O(H)$	$O(H)$	$O(s)$

$\log(\text{size})$

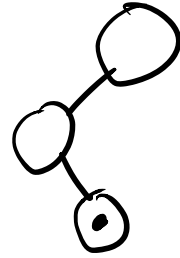


hope: height is $O(\log(\text{size}))$

AVL tree is a BST
 is a Binary Tree
 is a Tree

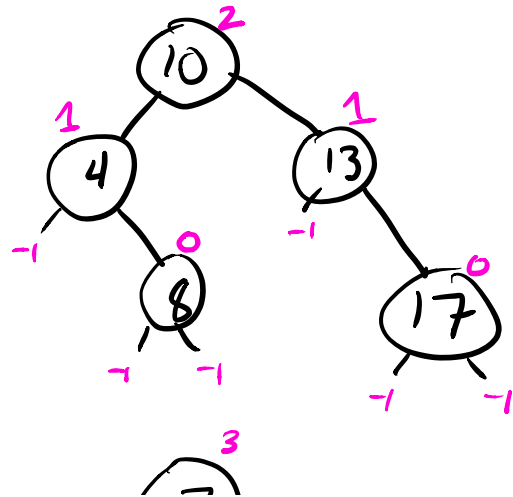
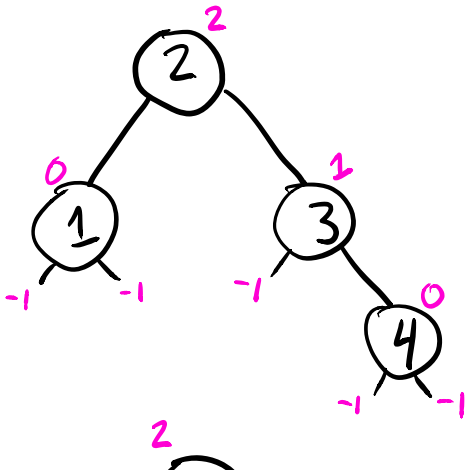
BST invariant:

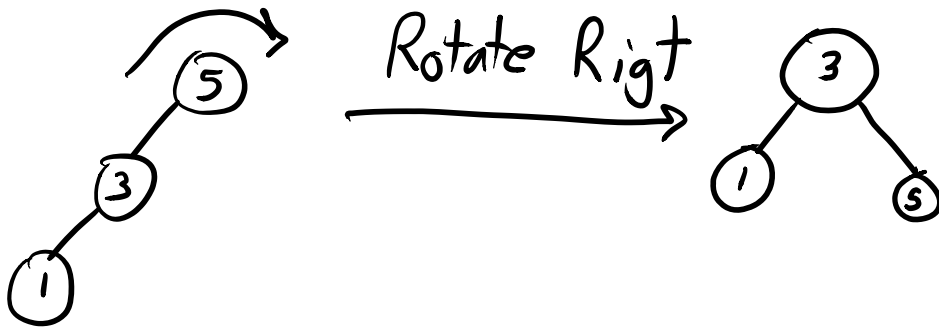
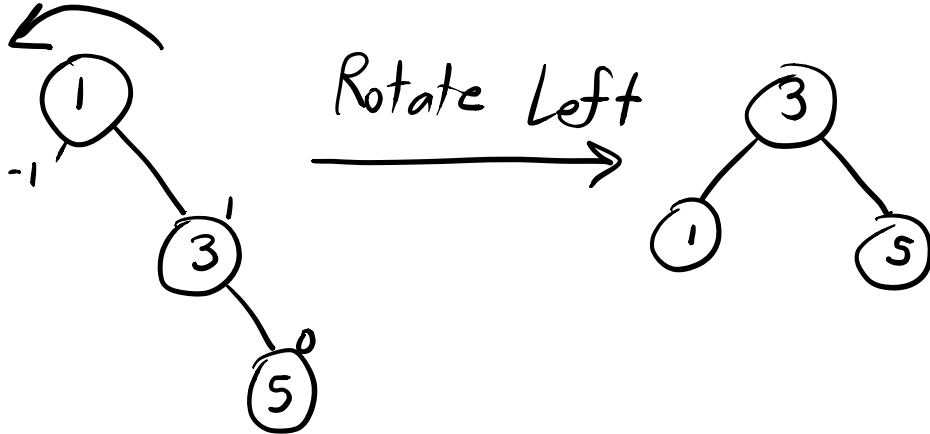
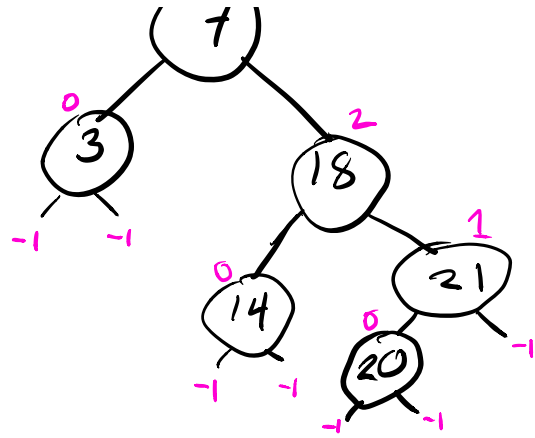
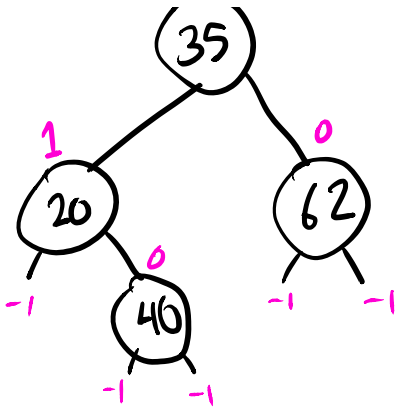
for every node, every
 right descendant is larger, every
 left descendant is smaller

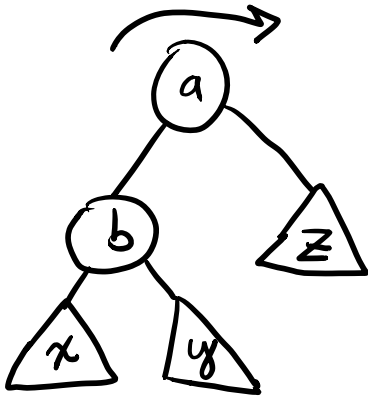


AVL-tree invariant:

for every node, the heights of
 the left & right subtrees
 differ by at most one.







Rotate Right

