

## Binary Search Trees

Map <K, V>  
Set <E>

insert  
→ remove (then)

1. find the node  
2. if no children (Leaf)  
→ remove the node

b) no child  
parent → grandchild

c) two children  
find the predecessor  
→ Right child no more right

remove (predecessor)  
then place predecessor here

find

Max → go right

min → go left

size → ~~Has a constant~~

base case  
Leaf → 1

return 1 + left size  
+ right size

## traversals

list for (String s: t) {

for (int i: t) {

↑  
iterable

for (K in t) {

↑  
A = List

## Tree Map

## recursion

~~L, P, R~~

~~preorder~~

~~P, L, R~~

~~inorder~~

~~L, P, R~~

~~postorder~~

~~L, R, P~~

$O(n)$