

6.1.1

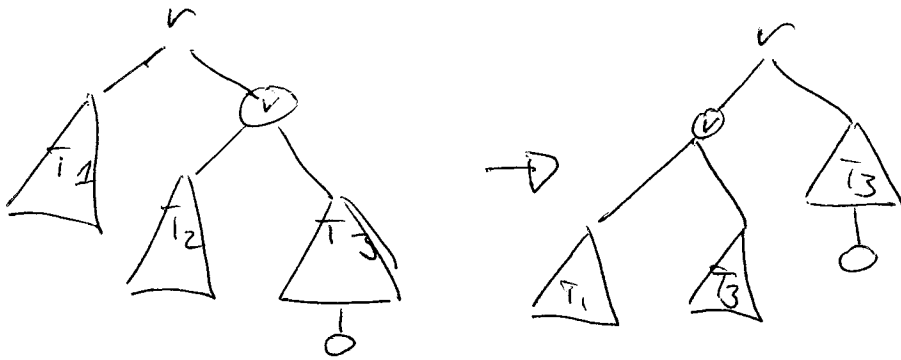
1. sort wst A

2. return $\lceil n/2 \rceil$ -th element of A

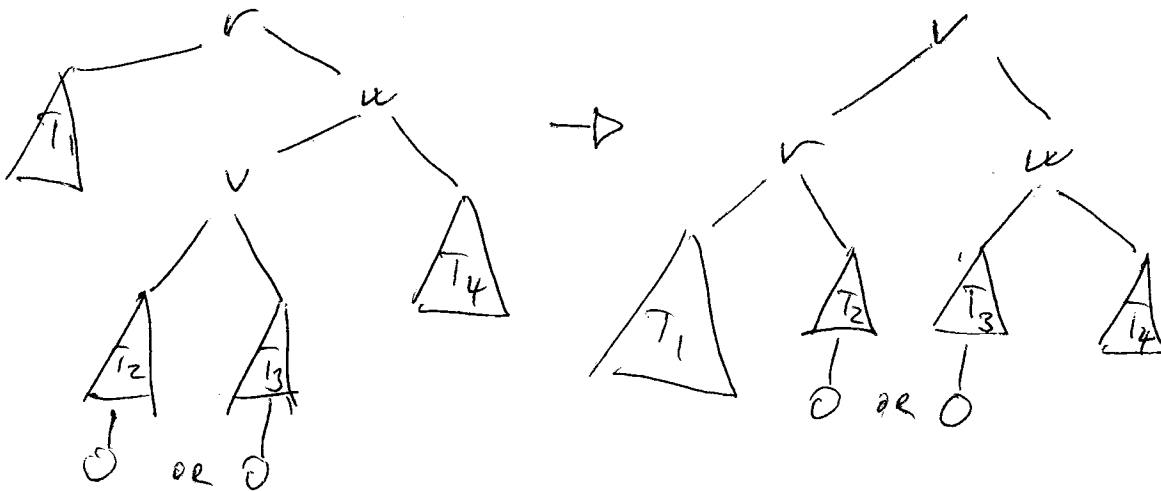
Time: $O(n \log n) + O(1) = O(n \log n)$

6.3.3

a) single L-rotation



b. double RL rotation



6.4.2

For $i = 1 \dots \lfloor n/2 \rfloor$

if $H[i] \neq \max\{H[2i], H[2i+1]\}$
error

// Note: if $2i+1 > n$, then
check only $H[i] \geq H[2i]$

Time $O(n)$

6.6.2

1. $H \leftarrow H * -1$

2. max-heap (H)

3. $H \leftarrow H * -1$

6.6.5

1. QuickHull ($u_0 \dots u_n$)

2. if P is triangle
return true
else return false

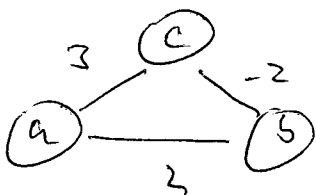
7.3.3

- Number of unique key values limited to the size of alpha set
- Many collisions
- an even distribution of words (# words starting with $q \neq$ # words starting with p)

9.11.

coin denominations $7, 5, 1$ for amount $n=10 \Rightarrow$
greedy approach would assign $7 \times 1 + 3 \times 3$ rather than 5×2

9.3.3



shortest path from $a \rightarrow b$ is 2 by Dijkstra, but the
shortest path is $a - c - b$ w/ length 1