

Bloco A: $O(N \log N)$ A_1

Bloco B: $O(N)$

Bloco C: $O(N^2)$

B_1

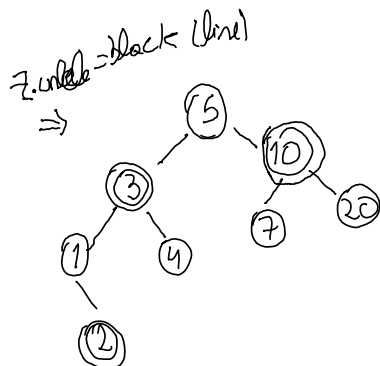
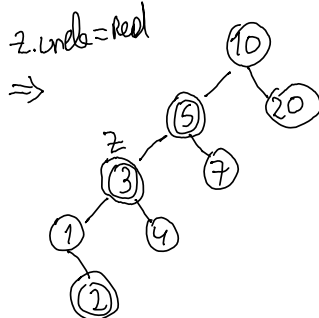
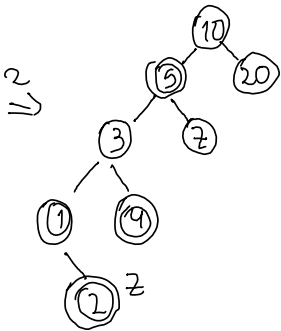
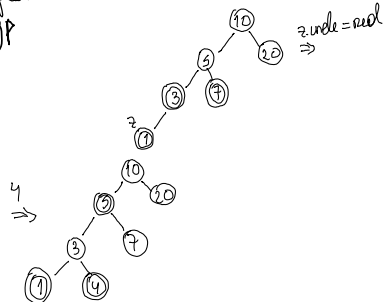
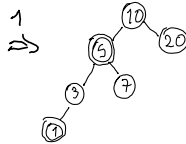
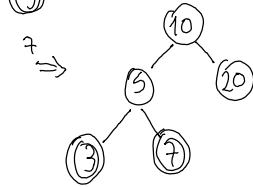
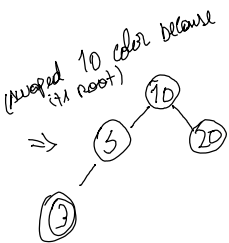
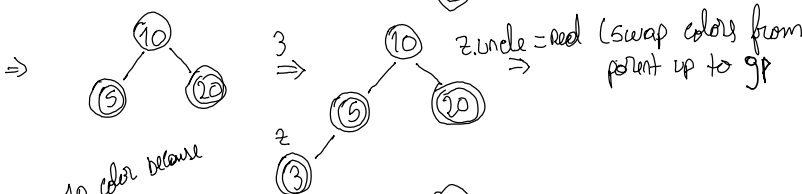
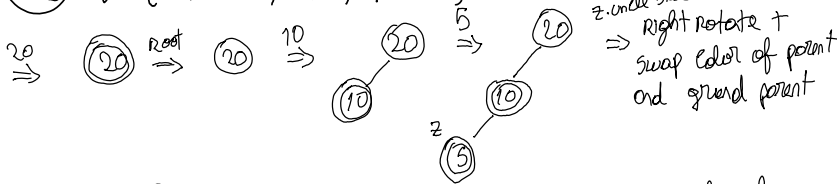
Fator de balanceamento tem que estar no conjunto $\{-1, 0, 1\}$

Para cada nó todos os valores da subárvore esquerda são menores e na subárvore direita maiores.

Altura da árvore com n nós é $\log(n)$

B_2

$v = \{20, 10, 5, 3, 7, 1, 4, 2\}$



D3

Cada bloco \rightarrow 4096 bytes info = 64 bytes ref = 4 bytes

Seja M o número de filhos em cada nó

\Rightarrow M número de referências

$$4096 \geq 64(M-1) + 4M \Rightarrow 4096 \geq 68M - 64$$

$$\Rightarrow M \leq 61,17$$

Nenhuma das anteriores

C1 20, 10, 5, 3, 7, 1, 4, 2

Feita Próx Página.

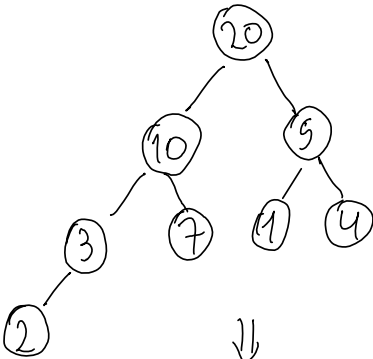
C2 Sim se $k = \log_b N$. k representa o número máximo de dígitos. Calculado através de $k = \log_b(\max)$ onde b é a base e \max o maior número. No caso do número tender para N então obtemos o declarado

20, 10, 5, 3, 7, 1, 4, 2

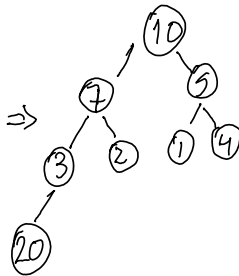
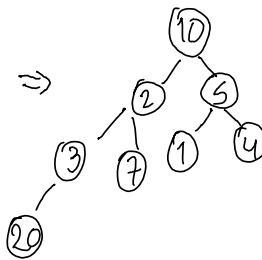
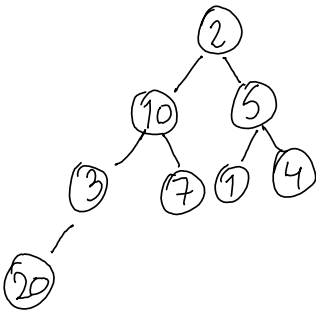
Heap tree initial



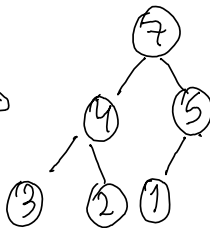
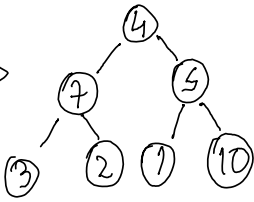
[20, 10, 5, 3, 7, 1, 4, 2]



[10, 7, 5, 3, 2, 1, 4, 20]



[7, 4, 5, 3, 2, 1, 10, 20]



[5, 4, 1, 3, 2, 7, 10, 20]

