

AULA e11

Algoritmos e Estruturas de Dados I

Árvores AVL – Inserção (rotação LR)

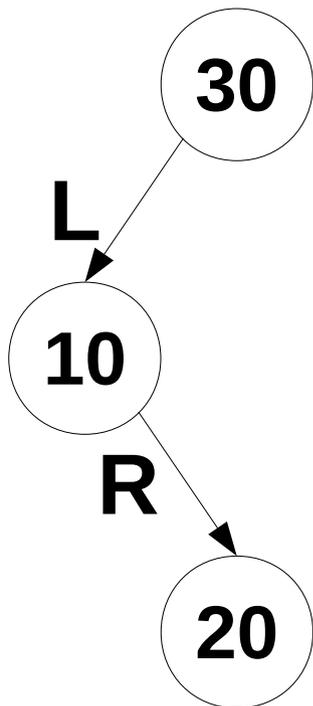
Prof. Luciano Antonio Digiampietri

Inserções em Árvore AVL

Posição relativa de u em relação à p e de v em relação à u:

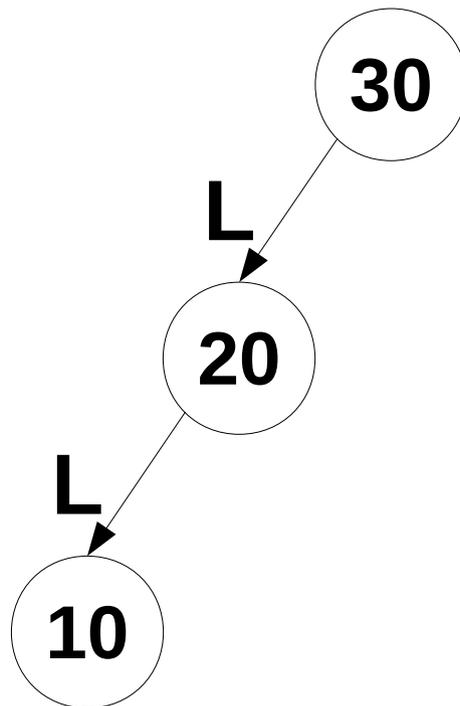
Esquerda-
Direita

LR



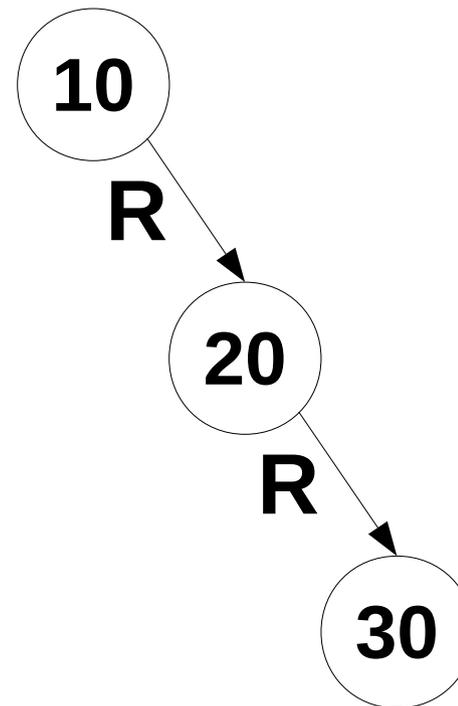
Esquerda-
Esquerda

LL



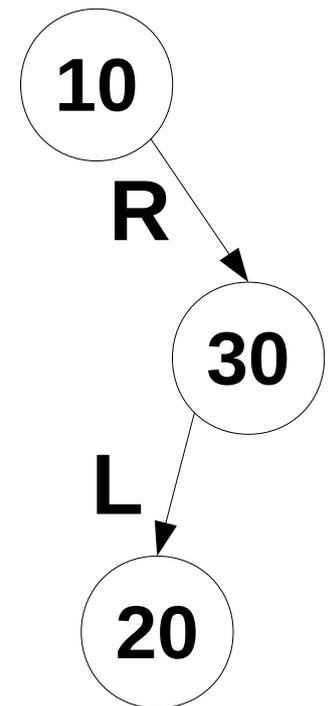
Direita-
Direita

RR



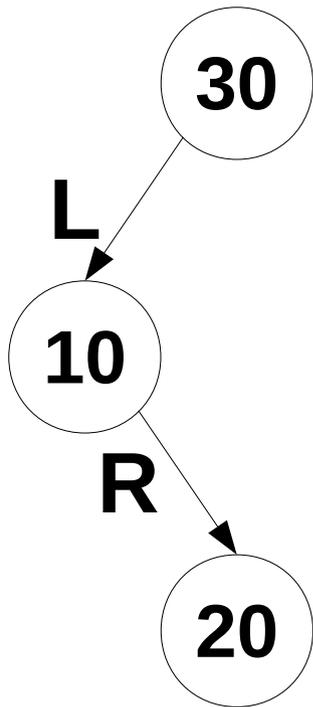
Direita-
Esquerda

RL

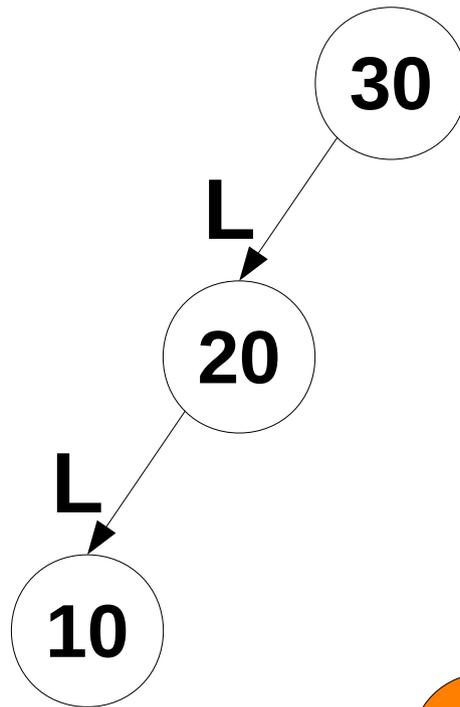


Inserções em Árvore AVL

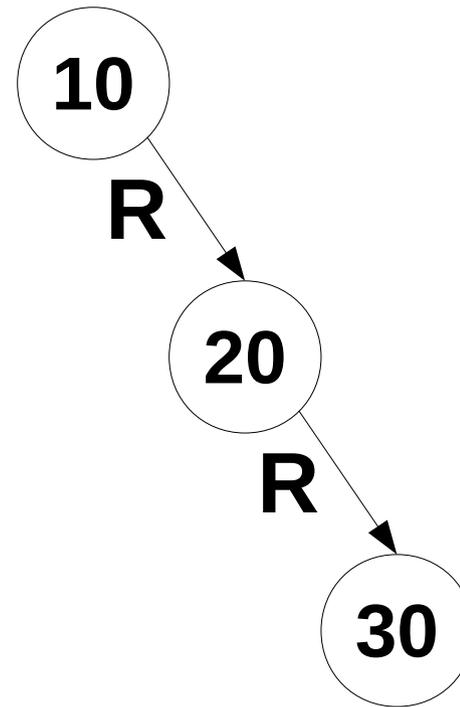
LR



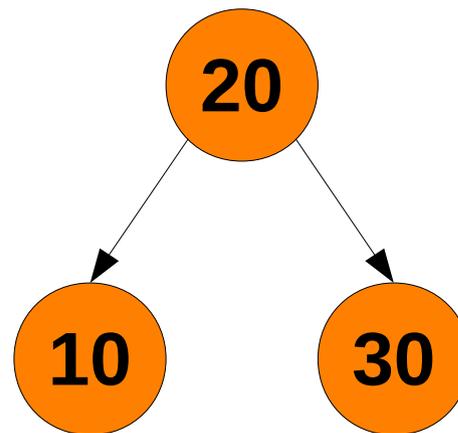
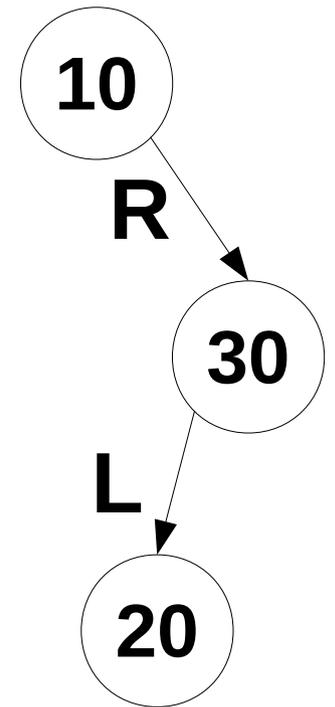
LL



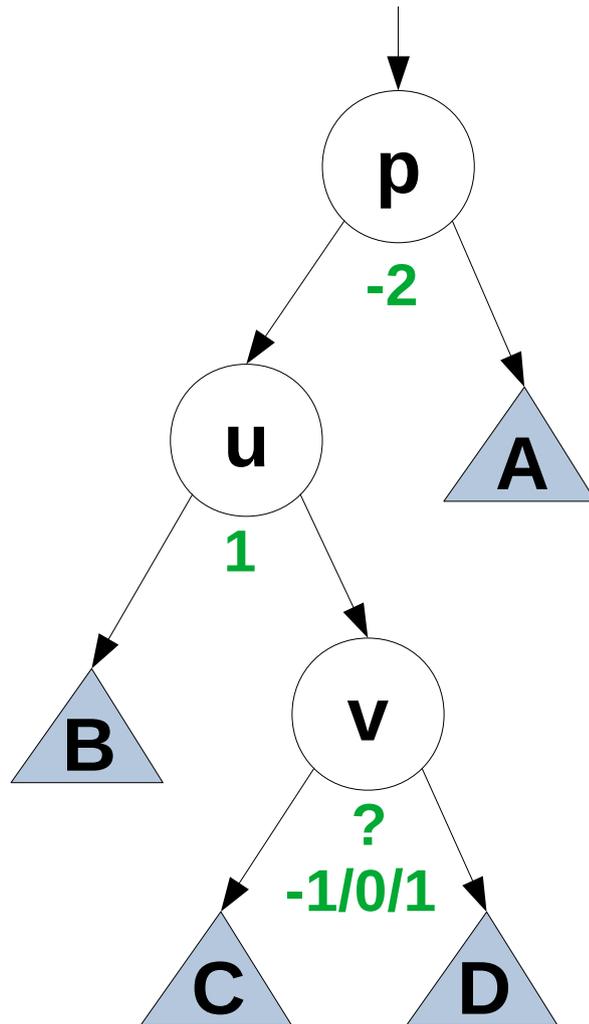
RR



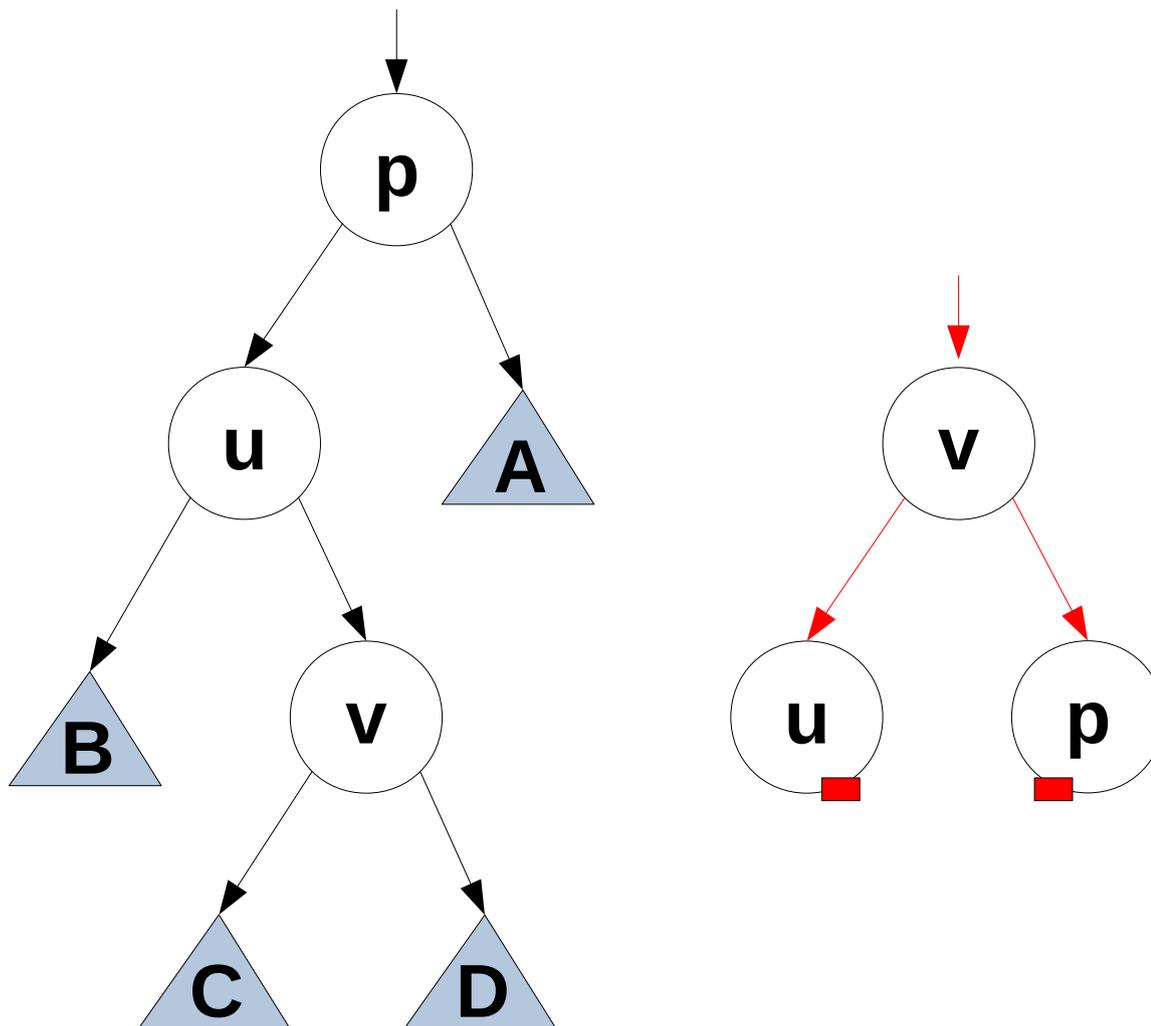
RL



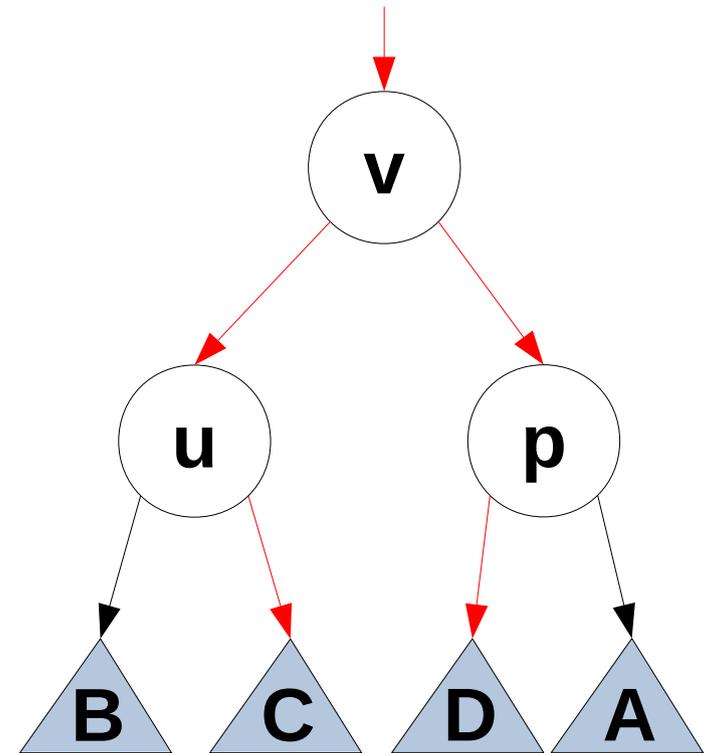
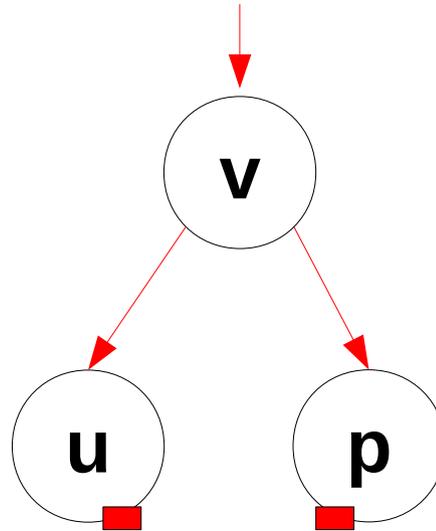
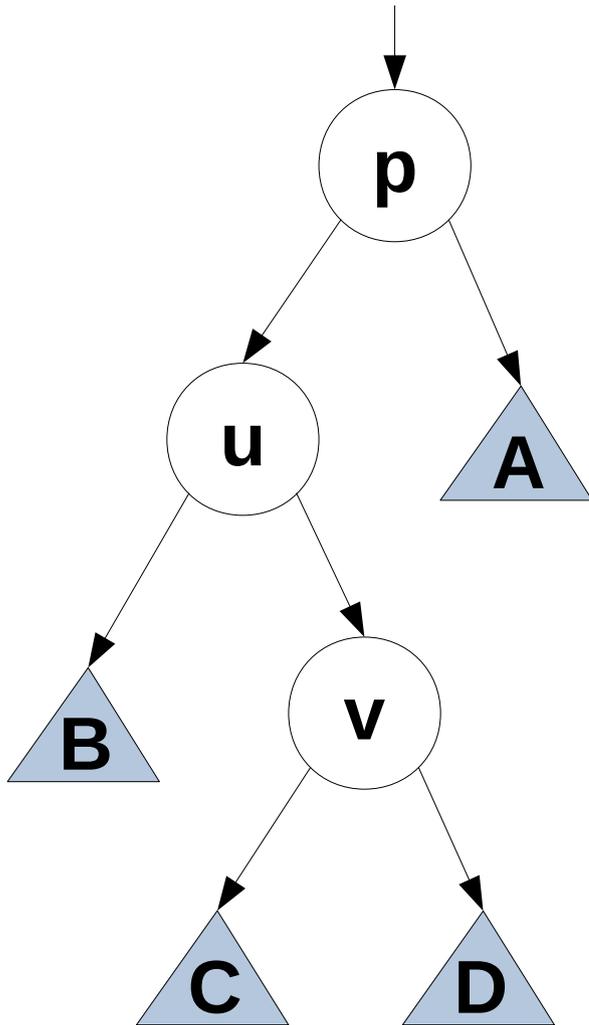
Rotação LR



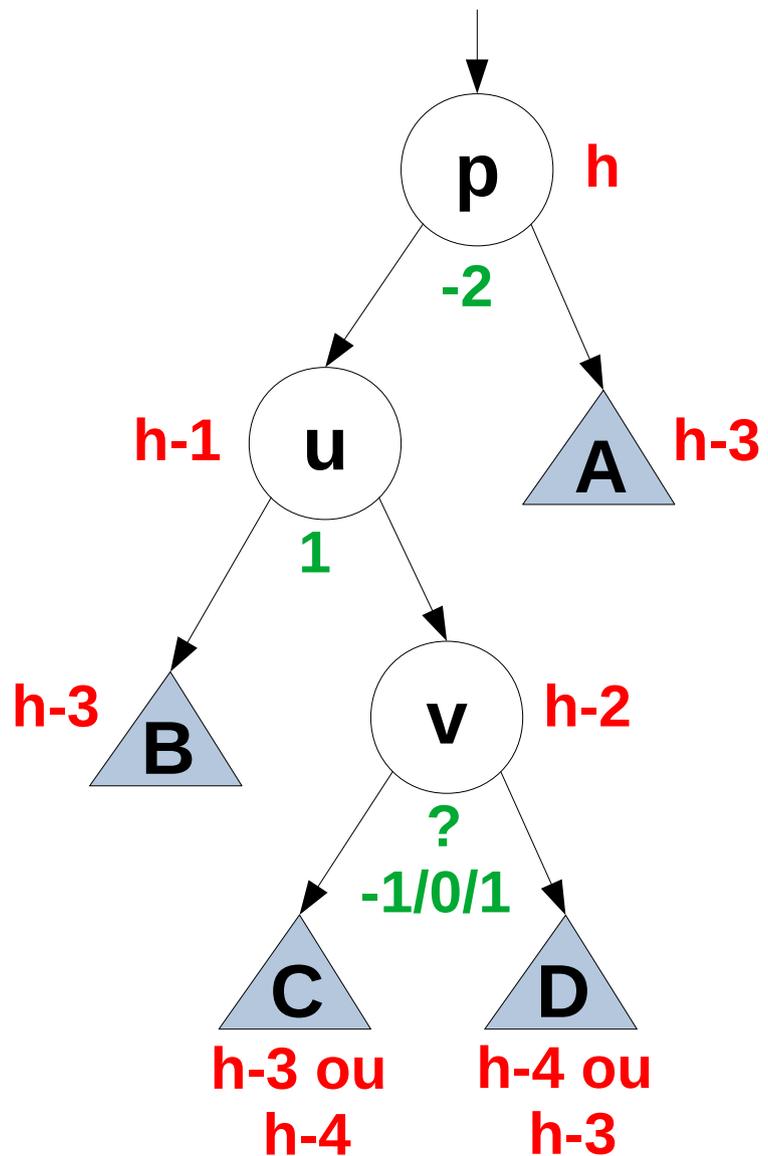
Rotação LR



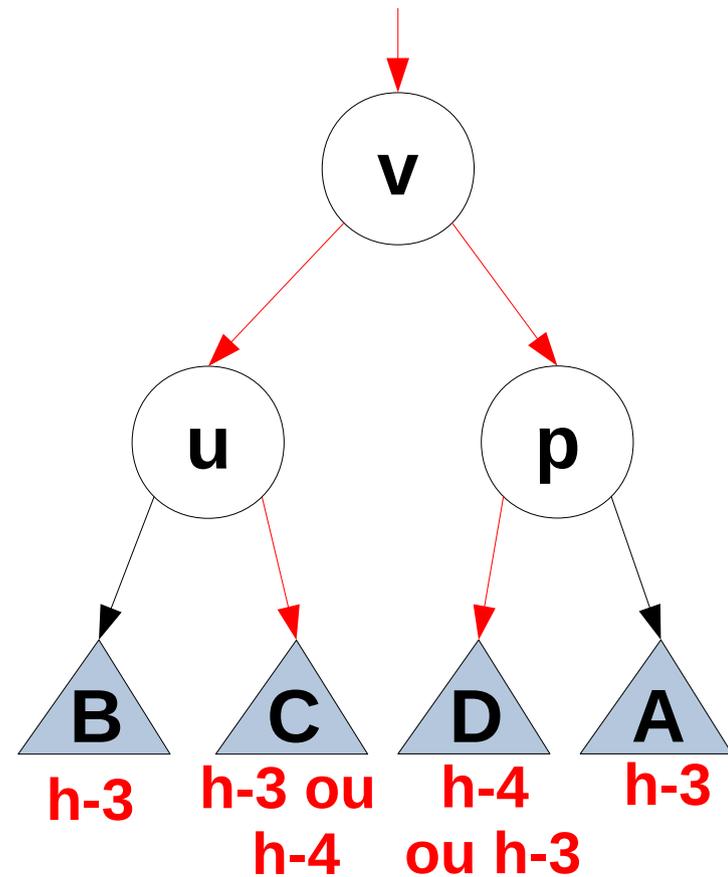
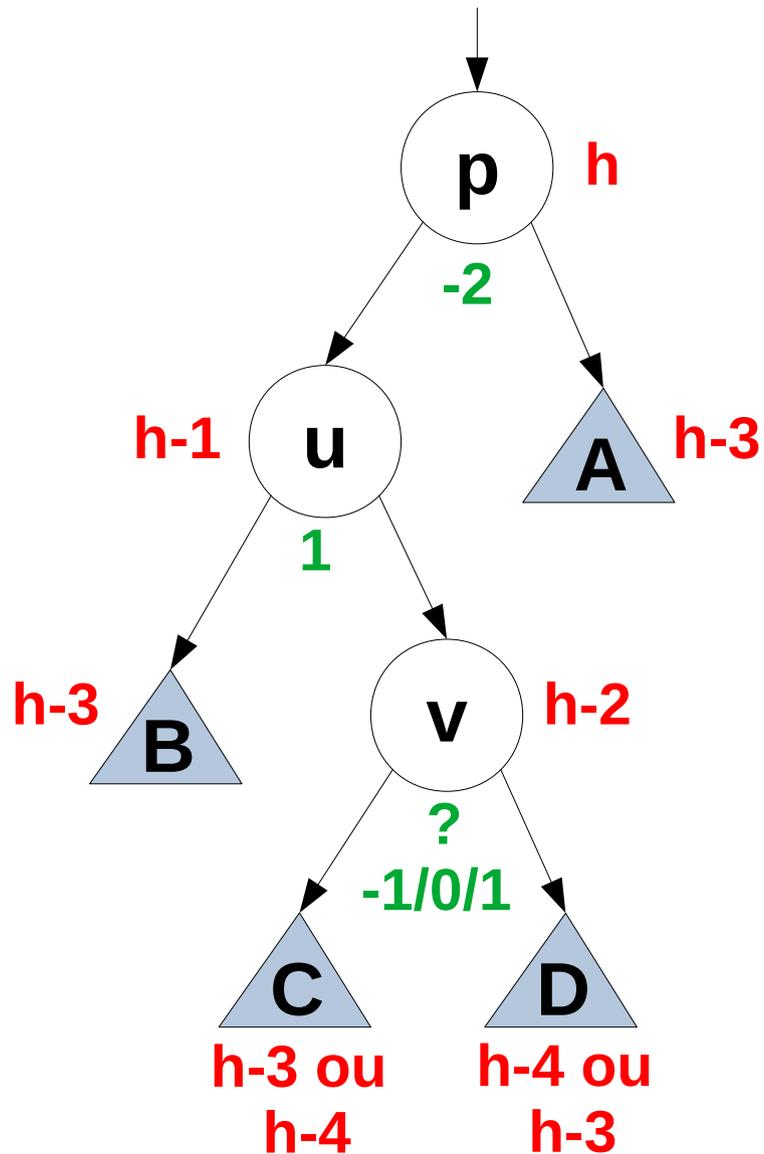
Rotação LR



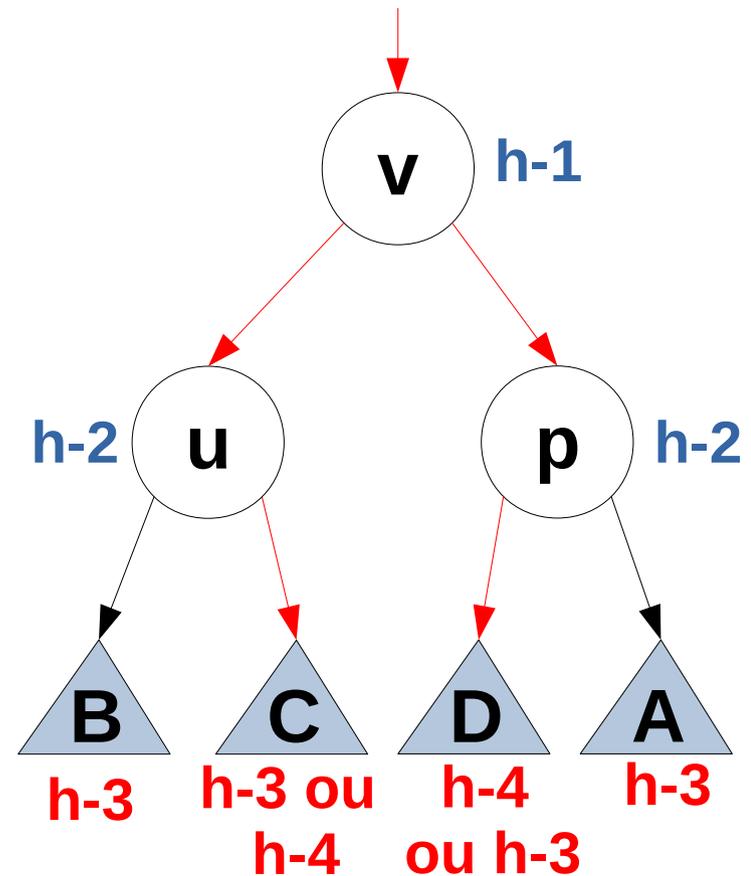
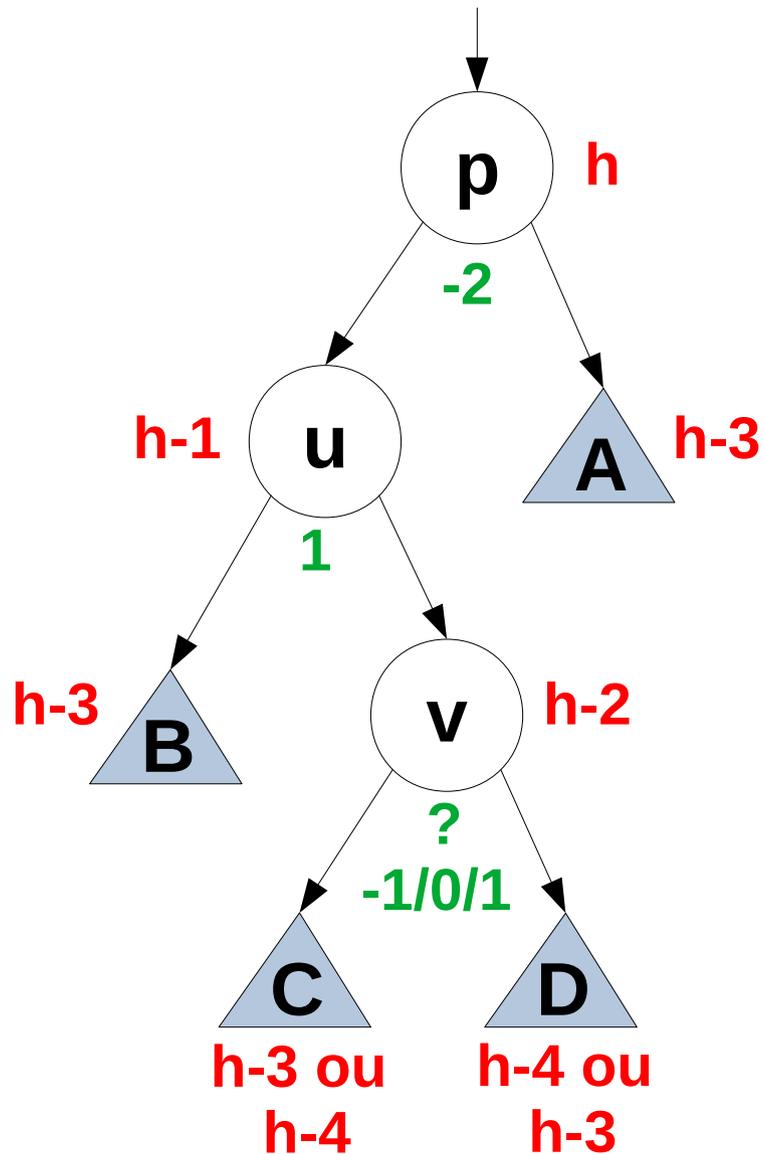
Rotação LR – altura dos nós



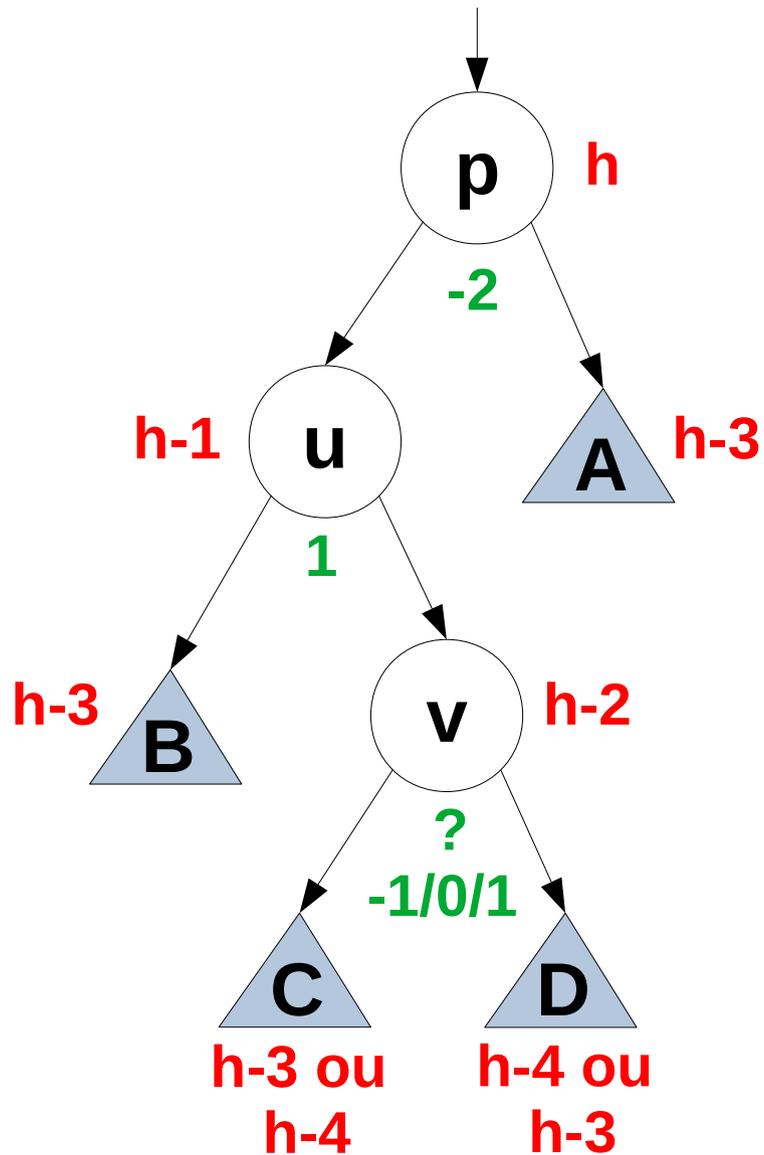
Rotação LR – altura dos nós



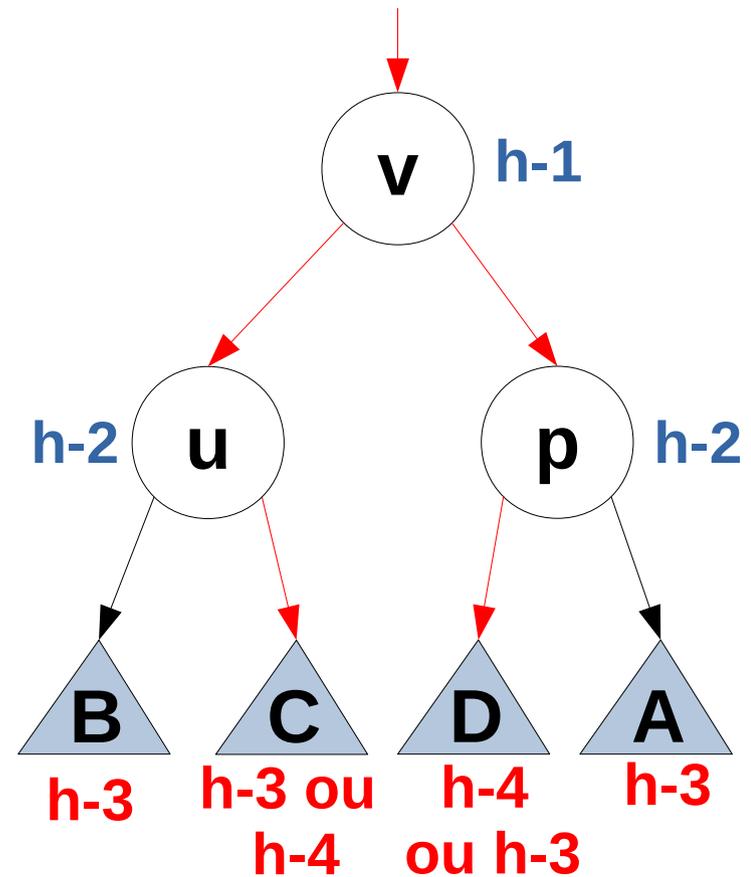
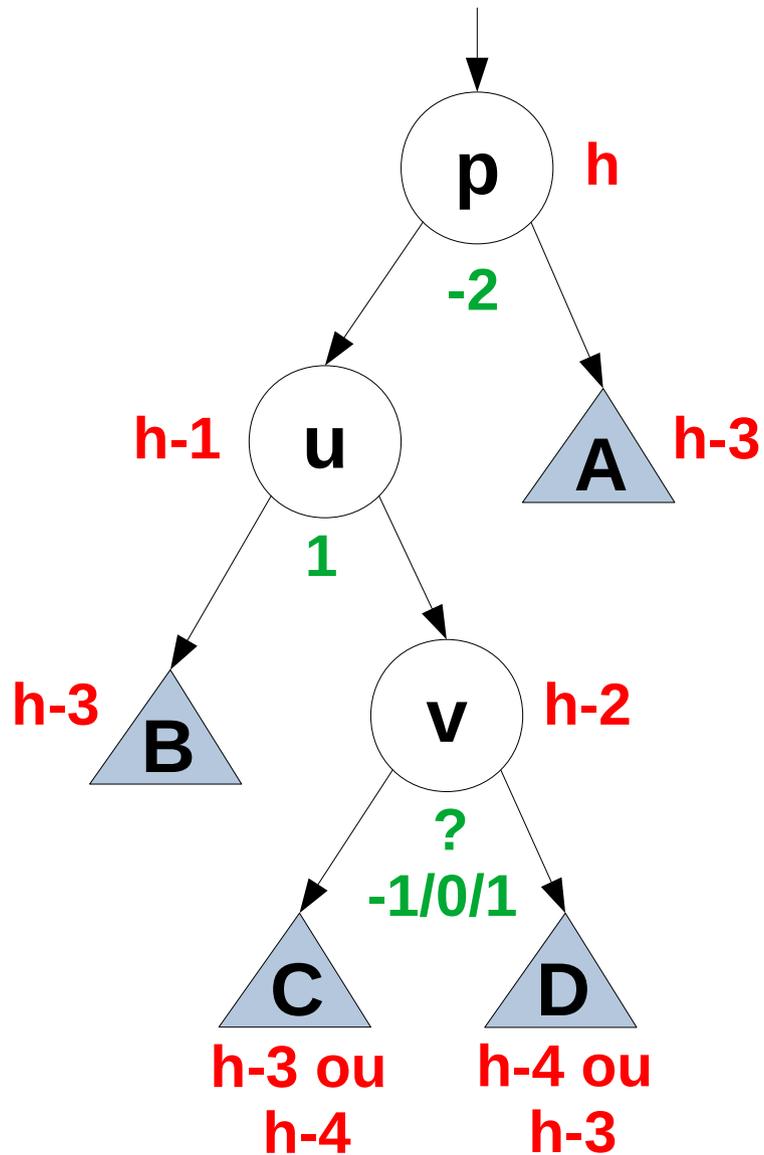
Rotação LR – altura dos nós



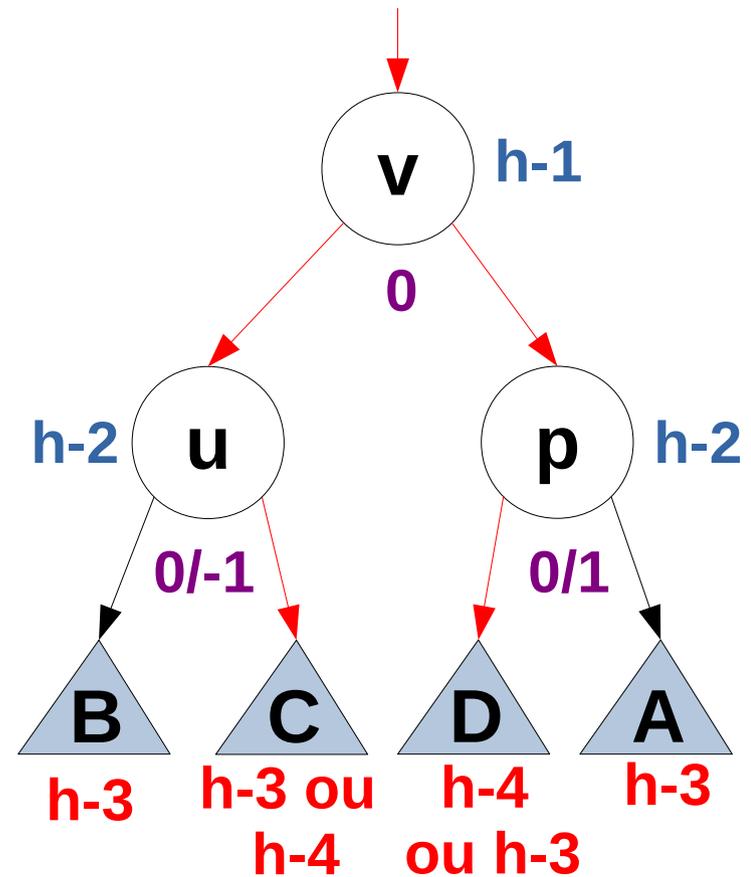
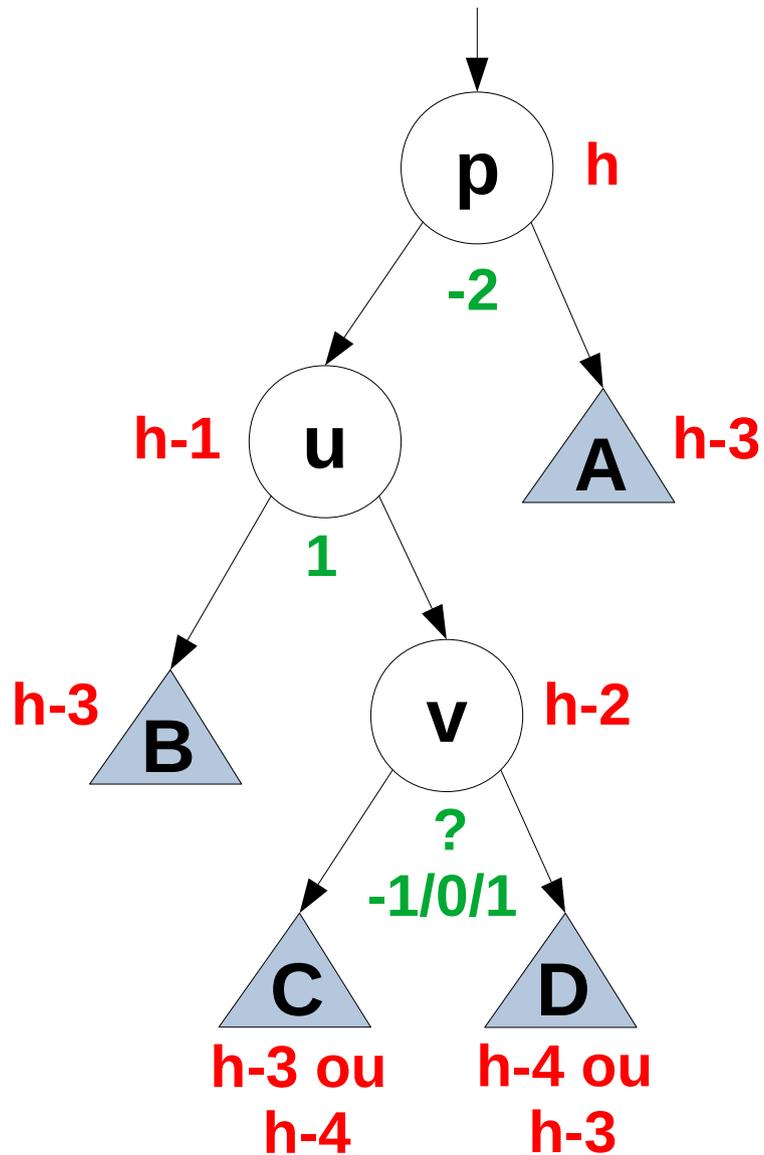
Rotação LR – balanceamento



Rotação LR – balanceamento



Rotação LR – balanceamento



Rotação LR – código

```
PONT rotacaoL(PONT p) {
    PONT u, v;
    u = p->esq;
    if (u->bal == 1) { // LR
        v = u->dir;
        u->dir = v->esq;
        v->esq = u;
        p->esq = v->dir;
        v->dir = p;
        if (v->bal == -1) p->bal = 1;
        else p->bal = 0;
        if (v->bal == 1) u->bal = -1;
        else u->bal = 0;
        v->bal = 0;
        return v;
    }
}
```

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