

Ordnen Sie den **Pseudocode** rechts den **Operationen** links zu!

ROOT()

if (ISLEAF(v)) return A[v_l] else return NULL;

COUNT(v)

if (ISLEAF(v)) return;
return [v_l, RMQ_H(v_l+1, v_r)-1];

ISANCESTOR(v,w)

Text

w ← PARENT(v);
if (w_r = v_r) return NULL;
if (w_r = v_r + 1) return [w_r, w_r];
return [v_r + 1, RMQ_H(v_r+2, w_r)-1];

ISLEAF(v)

return [1, n];

LEAFLABEL(v)

if (ISANCESTOR(v,w)) return v;
if (ISANCESTOR(w,v)) return w;
if (v_l > w_r) swap v and w;
k ← RMQ_H(v_l+1, w_r);
return [PSV_H(k), NSV_H(k)-1];

SDEPTH(v)

PARENT(v)

if (v_l = v_r) return TRUE else return FALSE;

FIRSTCHILD(v)

if (v = ROOT()) return NULL;
if (H[v_l] > H[v_l+1]) k ← v_l else k ← v_l+1;
return [PSV_H(k), NSV_H(k)-1];

EDGE LABEL(v,i)

return v_r - v_l + 1;

LCA(v,w)

if (v_l ≤ w_r ≤ v_r) return TRUE else return FALSE;

NEXTSIBLING(v)

if (ISLEAF(v)) return n - A[v_l] + 1;
return H[RMQ_H(v_l+1, v_r)];

d_v ← SDEPTH(v);
w ← PARENT(v);
d_w ← SDEPTH(w);
if (i > d_v - d_w) return NULL;
return T[A[v_l] + d_w + i - 1];