

ZADANIE 1.

RIGHT-ROTATE (T, x)

y = x.left

x.left = y.right

if (y.right != NIL)

y.right.p = x

if (x.p == NIL)

T.root = y

elif (x == x.p.right)

x.p.right = y

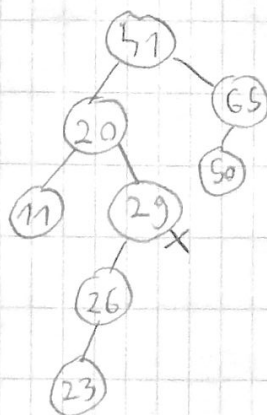
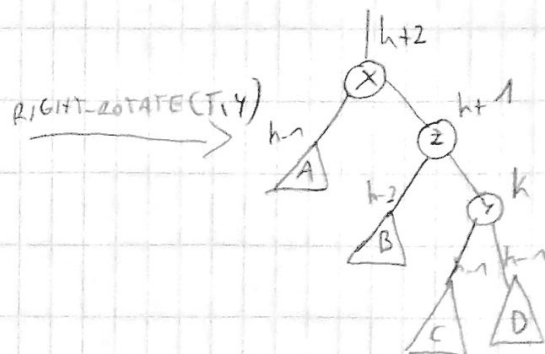
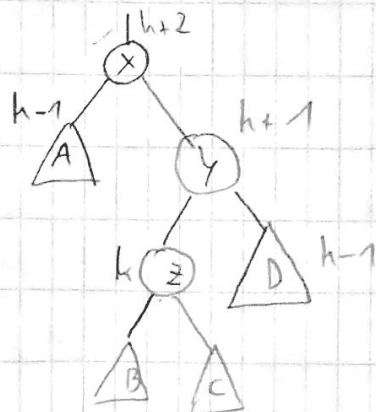
else:

x.p.left = y

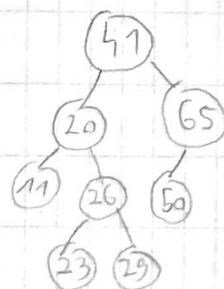
y.right = x

y.p = x.p

x.p = y



RR(T, x)



ZADANIE 2.

AVL-INSERT (T, x)

BST-INSERT (T, x)

node = BST-SEARCH (x, root)

while (node != root)

if (x.right.h > x.left.h)

if (x.right.right.h > x.right.left.h)

LEFT-ROTATE (T, T.root)

else

RIGHT-ROTATE (T, T.root->right)

LEFT-ROTATE (T, T.root)

else:

if (x.left.left.h > x.left.right.h)

RIGHT-ROTATE (T, T.root)

else: LEFT-ROTATE (T, T.root->left)

node = node.p

node.h = max (node.left.h, node.right.h)

O(n log n)

h - insert

log n - visited nodes