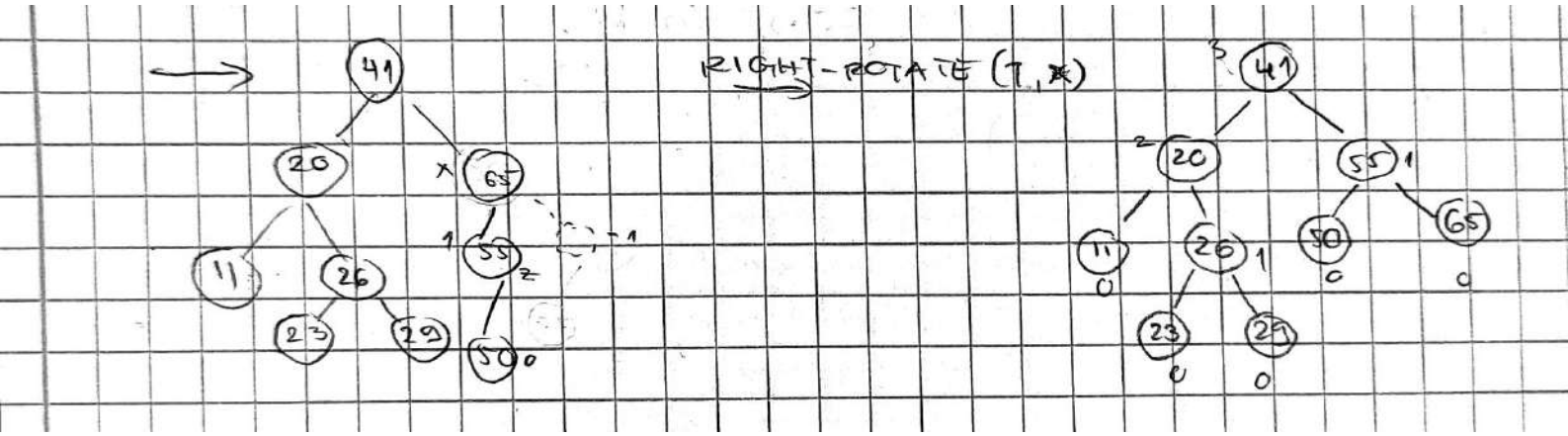
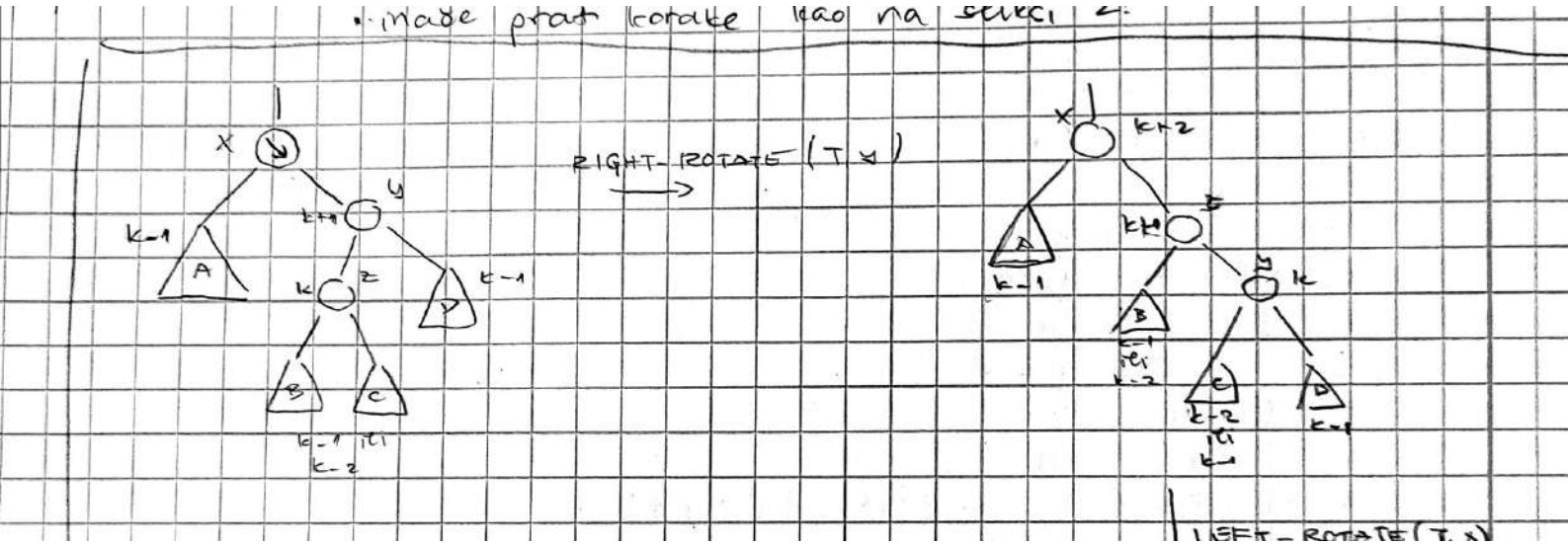
Zadaća 5

) RIGHT-ROTATE(T, x)

```
y = x.left
x.left = y.right
if y.right ≠ NIL
|  y.right.p = x          y.p = x.p
if x.p == NIL
|  T.root = y
elseif  x == x.p.right
|                x.p.right = y
else    x.p.left = y
y.right = x ;
x.p = y
```


RIGHT-ROTATE (T, x)
41
20
65
11
26
55
23
29
50
41
20
55
11
26
50
65
23
29


RIGHT-ROTATE (T, x)
LEFT-ROTATE (T, x)

2)

```
insert(T, x):
if T is null:
    T ← novi AVL node sa vrijednosti x
    return T

if x < T.value:
    T.left ← insert(T.left, x)
else:
    T.right ← insert(T.right, x)

T.height ← max(height(T.left), height(T.right)) + 1

balance ← getBalance(T)

if balance > 1 and x < T.left.value:
    return rightRotate(T)

if balance < -1 and x > T.right.value:
    return leftRotate(T)

if balance > 1 and x > T.left.value:
    T.left ← leftRotate(T.left)
    return rightRotate(T)

if balance < -1 and x < T.right.value:
    T.right ← rightRotate(T.right)
    return leftRotate(T)

return T
```

vrijeme : $O(\lg n)$, u najgorem slučaju ćemo proći visinu stabla