

CS & IT ENGINEERING

Data Structure



Tree
Chapter- 5
Lec- 06



By- Pankaj Sharma sir

TOPICS TO BE COVERED

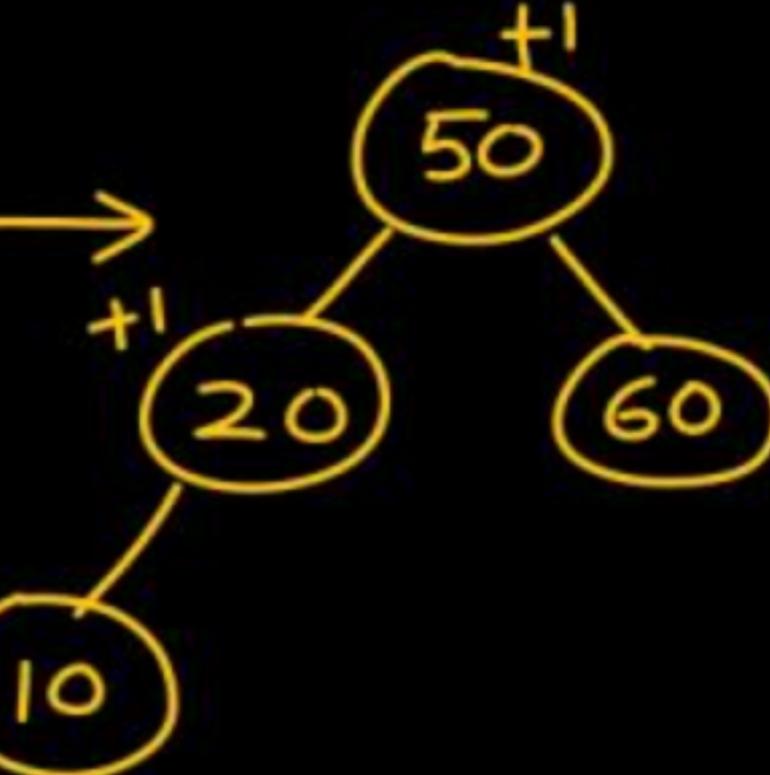
Tree-VI

Q1.

50, 20, 60, 10, 8, 15, 32, 46, 11, 48



10

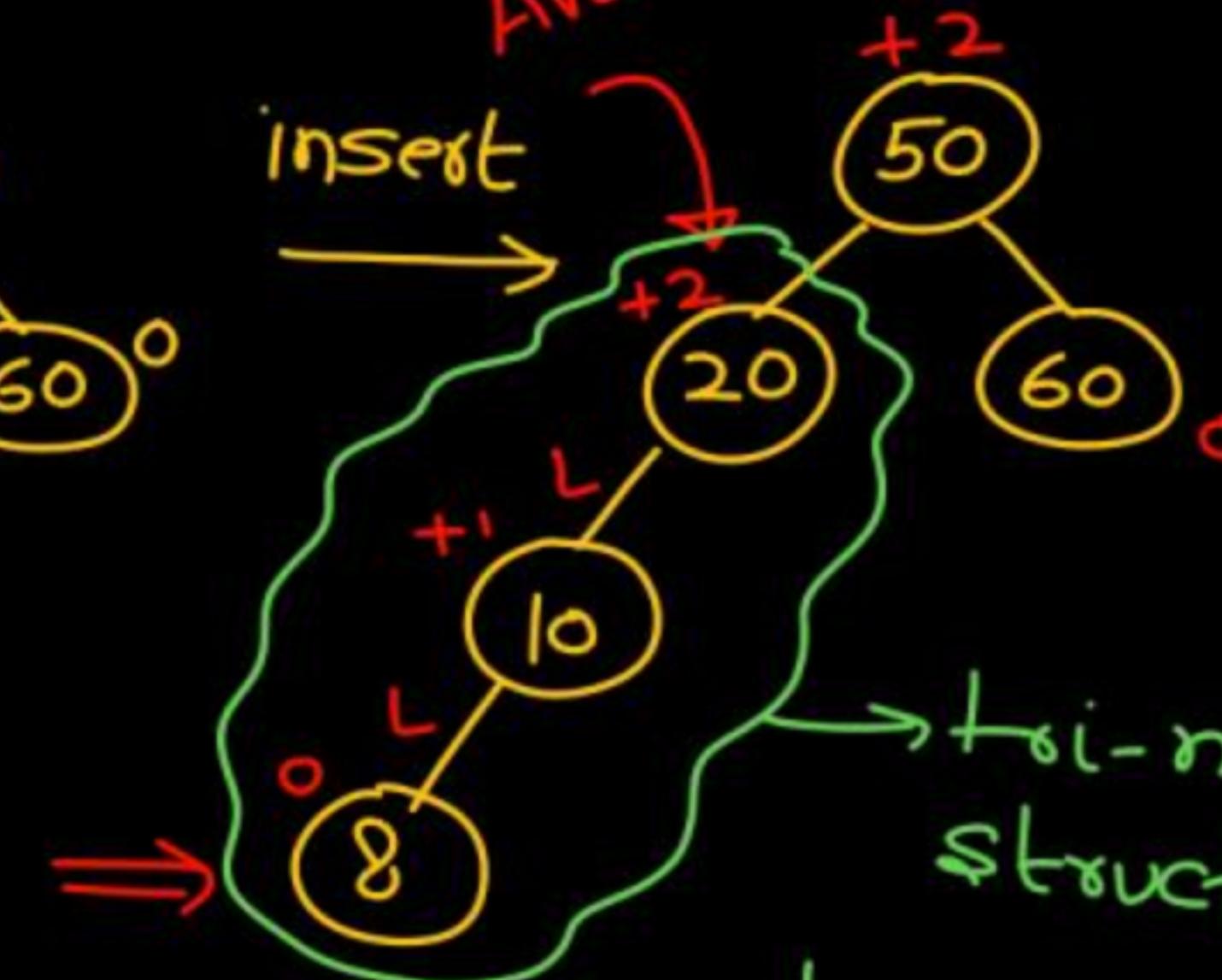


$$3 - 1 = 2$$

Newly inserted node

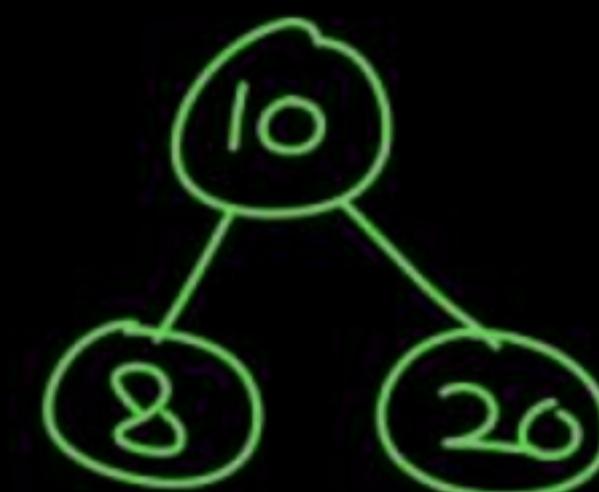
AVL tree prop violated

insert



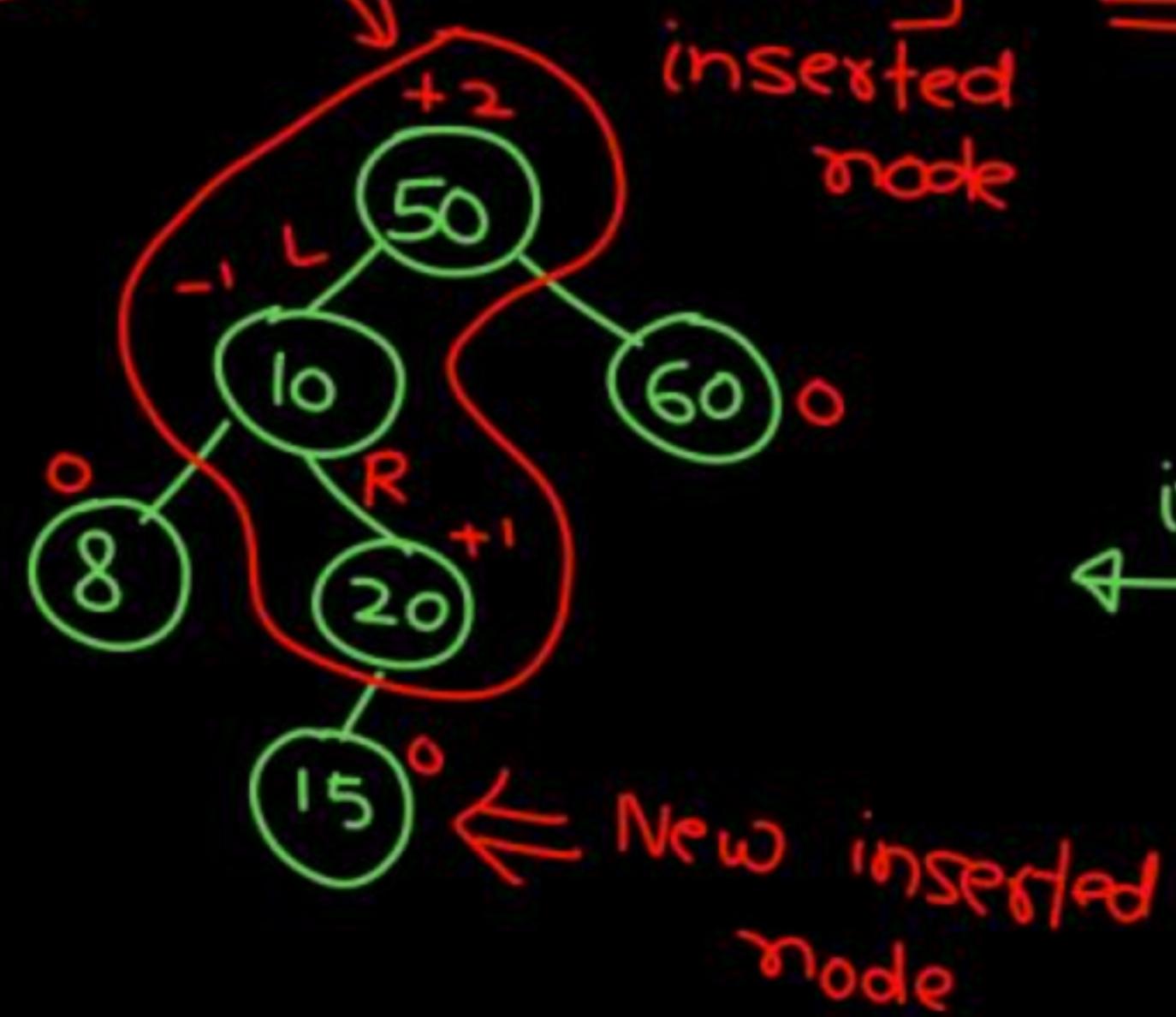
left-node structure

8, 10, 20

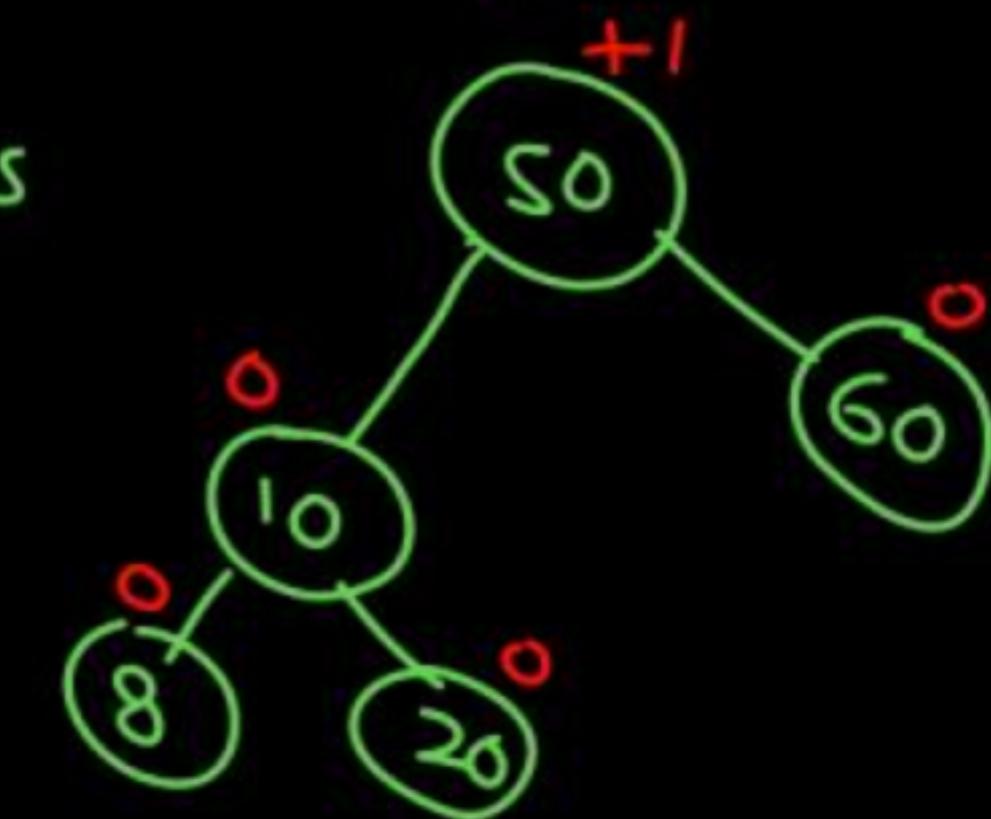


LL Rotation

insert 15

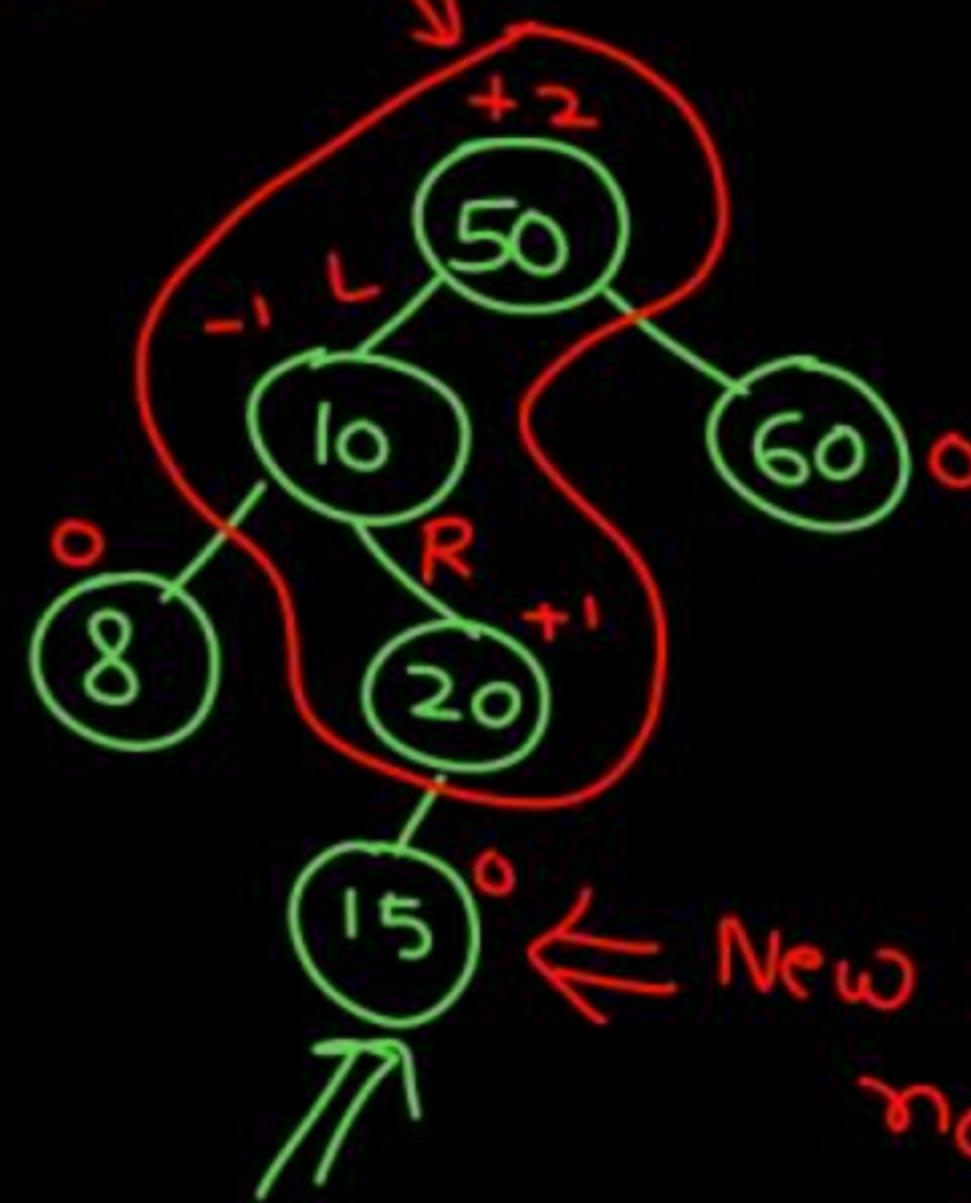


New inserted node

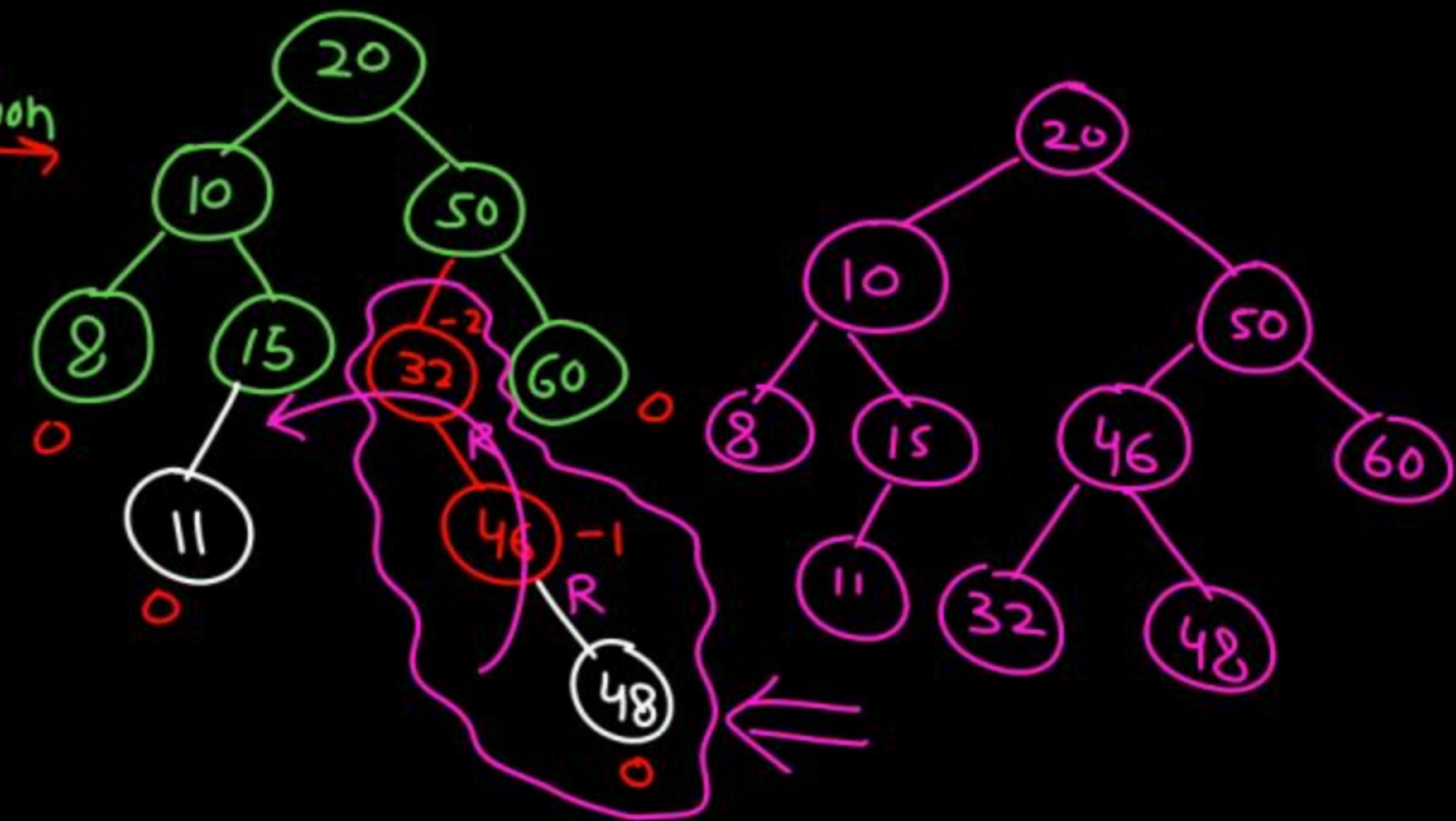


50, 20, 60, 10, 8, 15, 32, 46, 11, 48 ✓ ✓

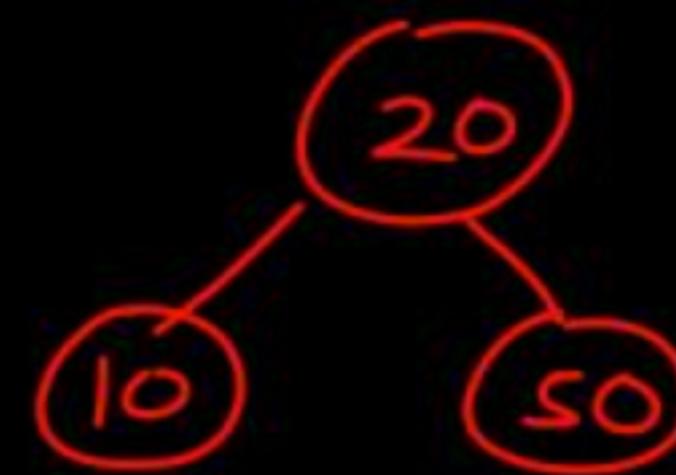
$$3 - 1 = 2$$



LR
Rotation

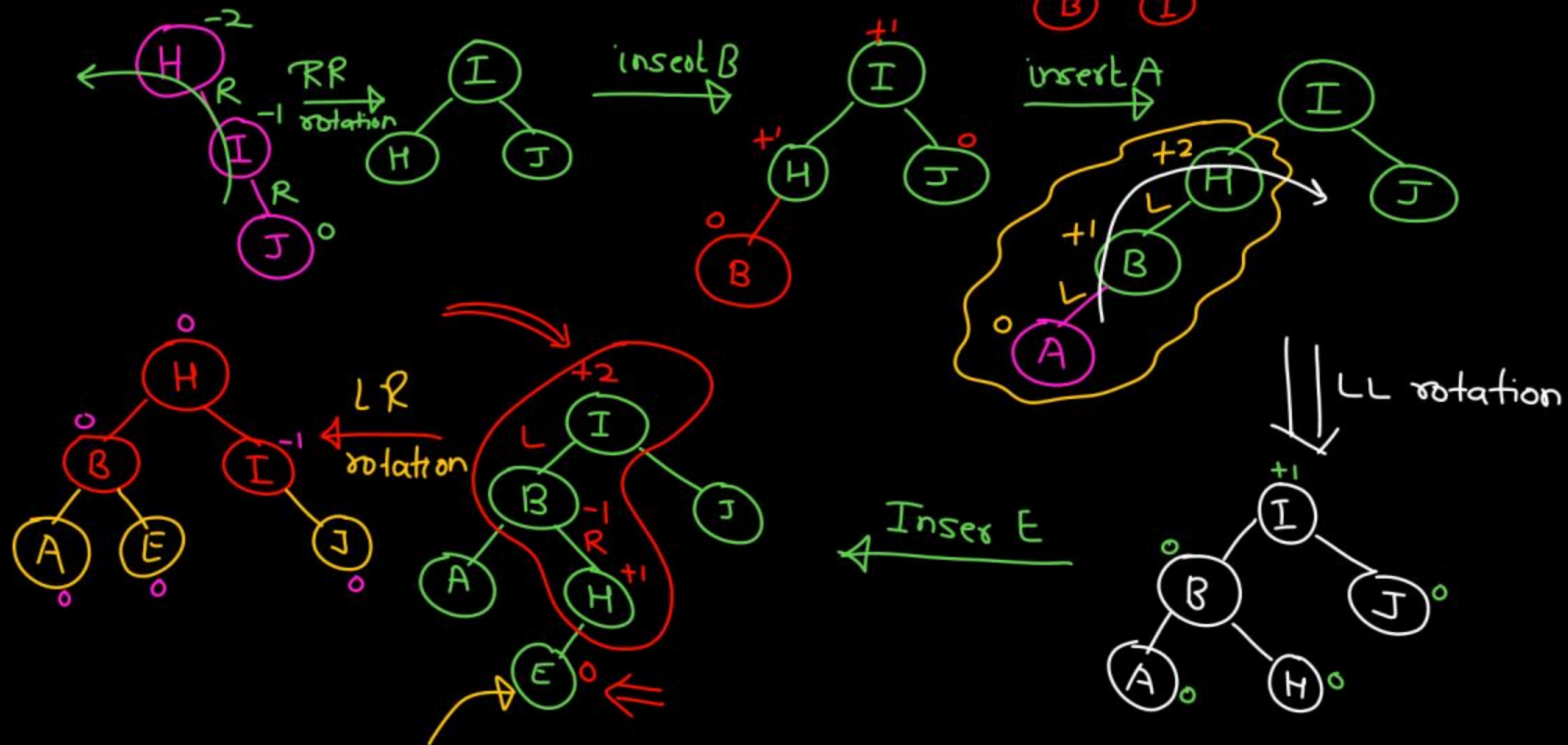


10, 20, 50

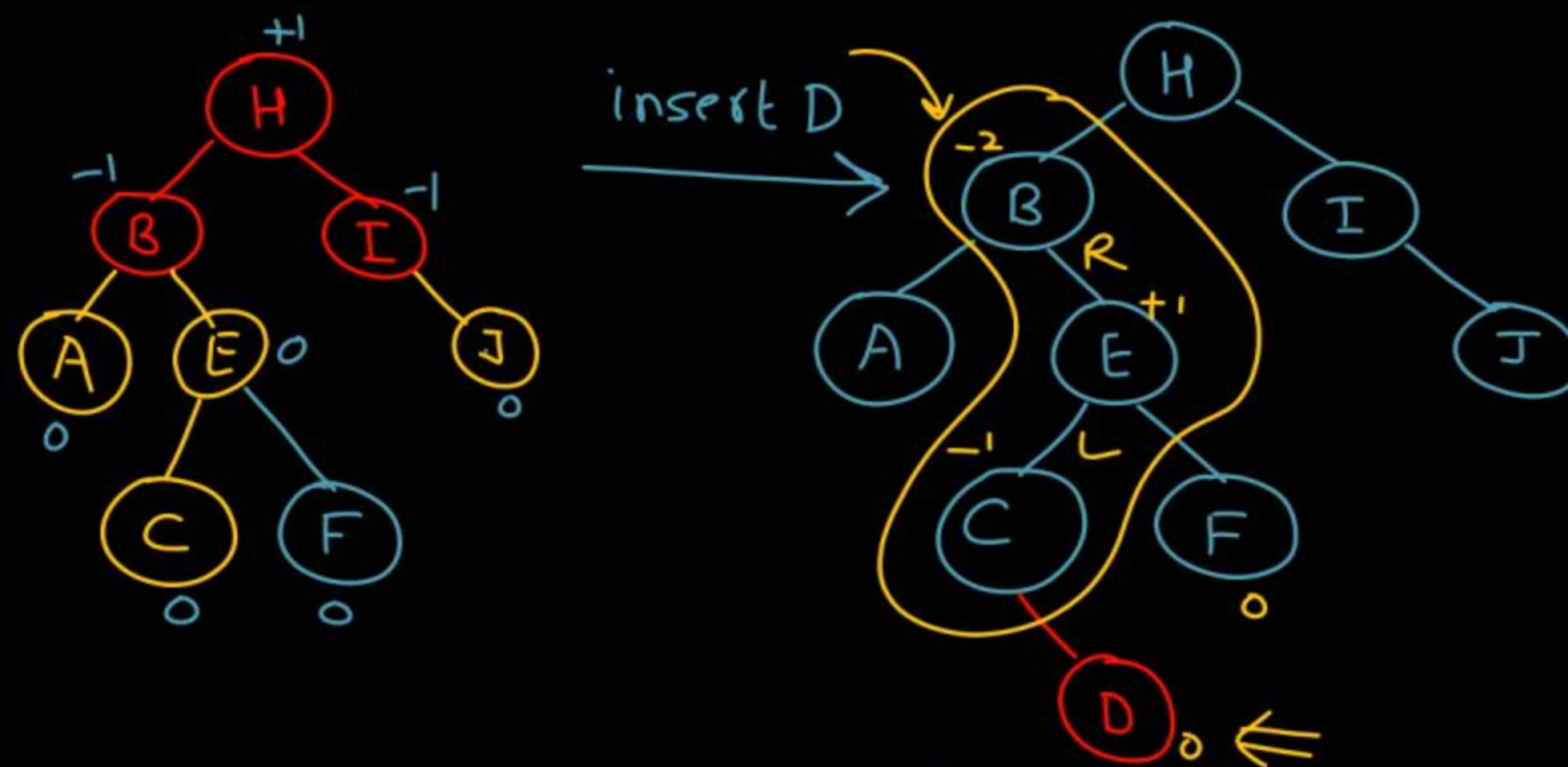


Q2:

H, I, J, B, A, E, C, F, D, G, K, L



Q2: H, I, J, B, A, E, C F, D, G, K, L

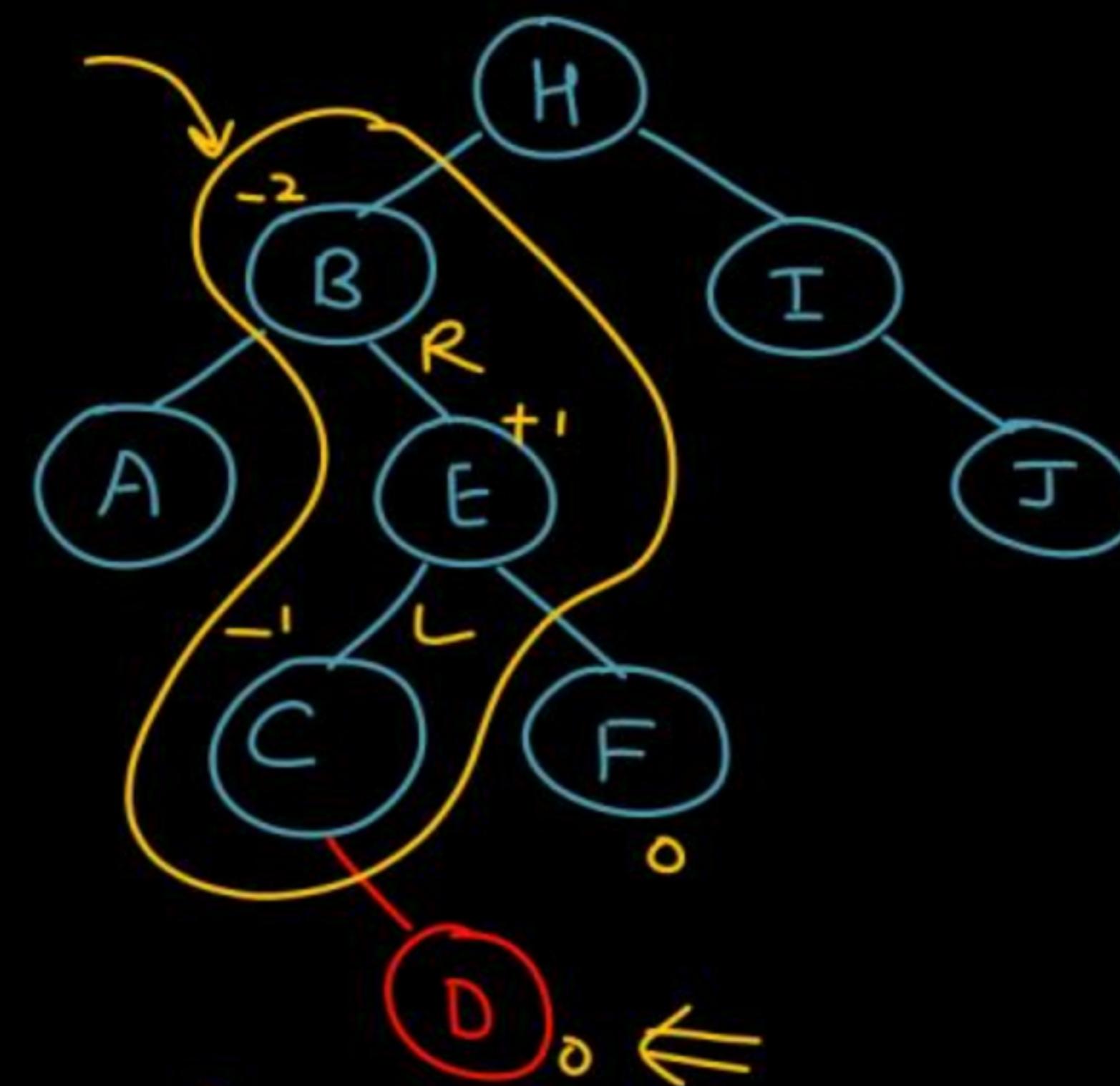
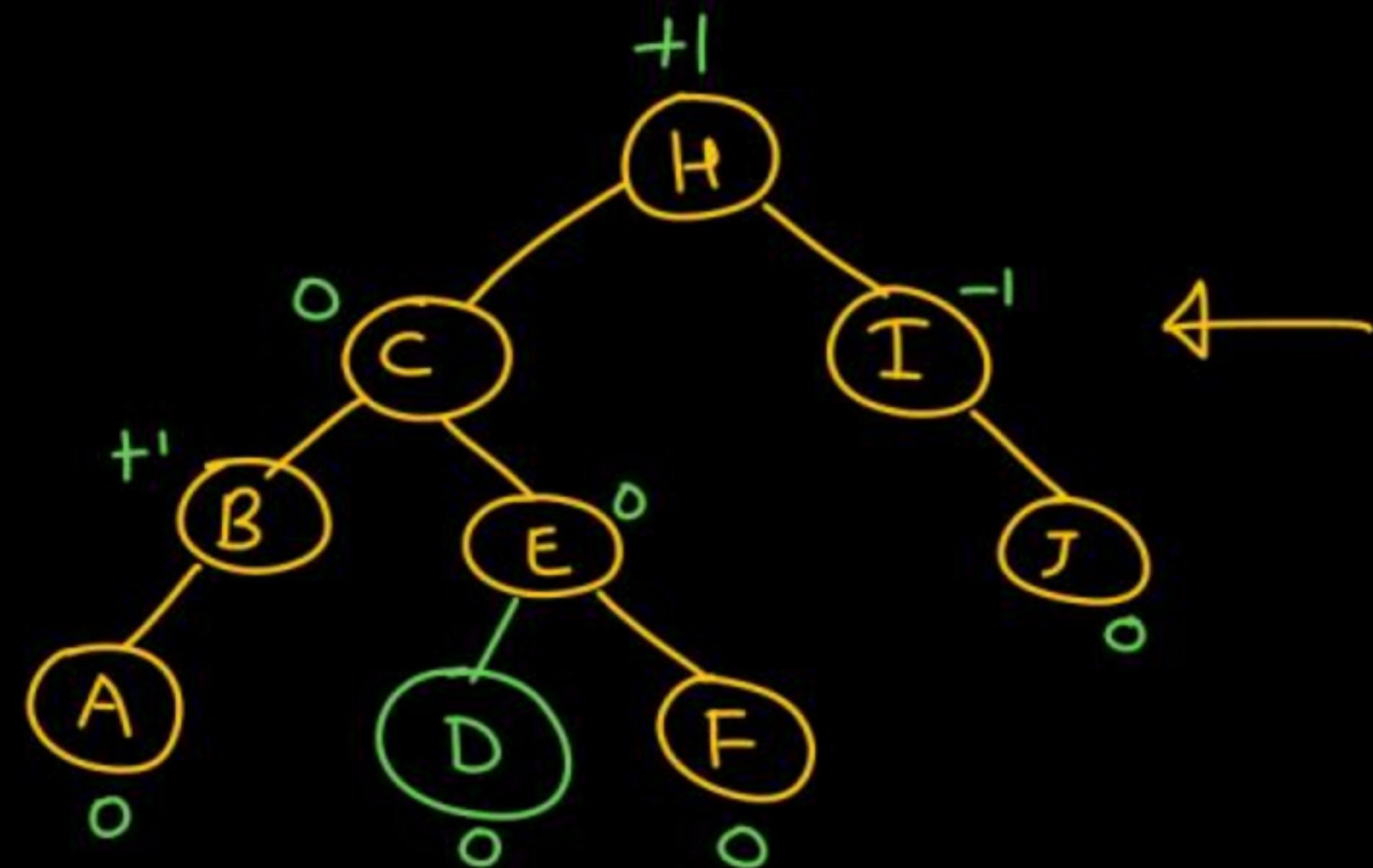


D is in the left subtree of
the right subtree of B

Q2:

H, I, J, B, A, E, C, F, D, G, K, L

B ⊂ E



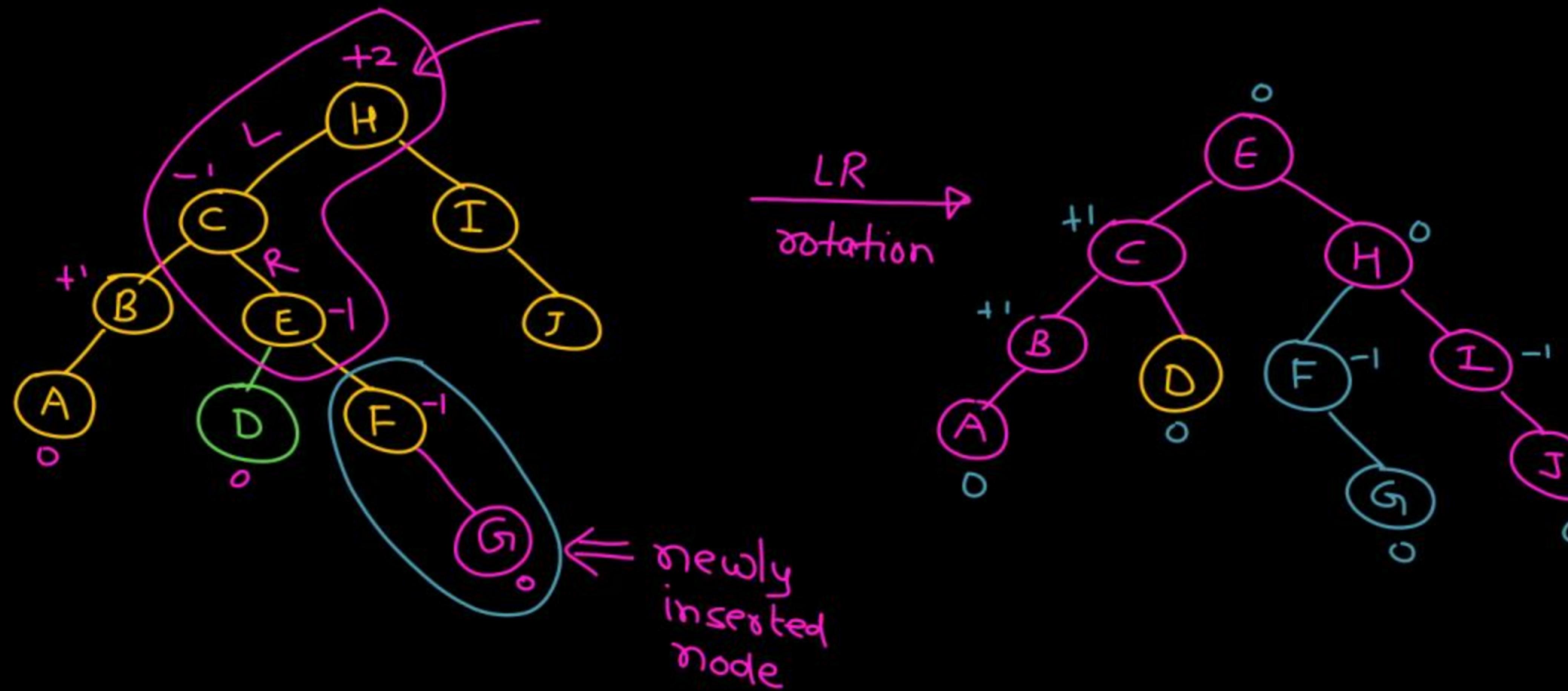
D is in the left subtree of
the right subtree of B

Q2:

H, I, J, B, A, E, ✓ F, D, ✓ G, K, L

C, E, H

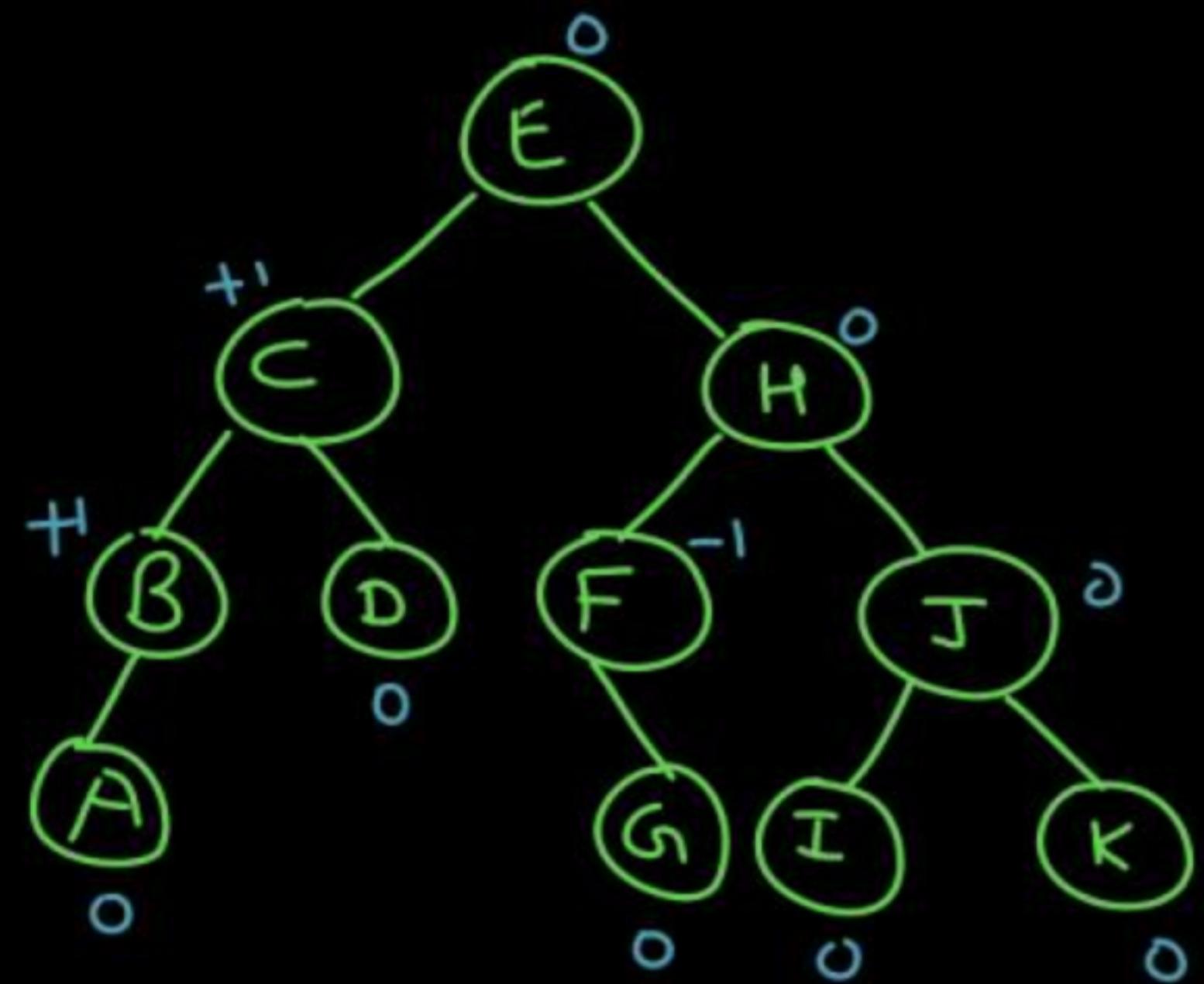
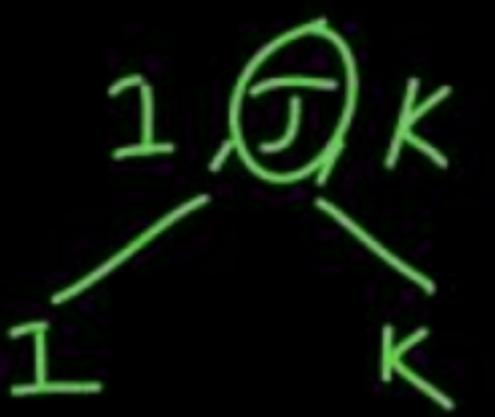
B ⊂ E



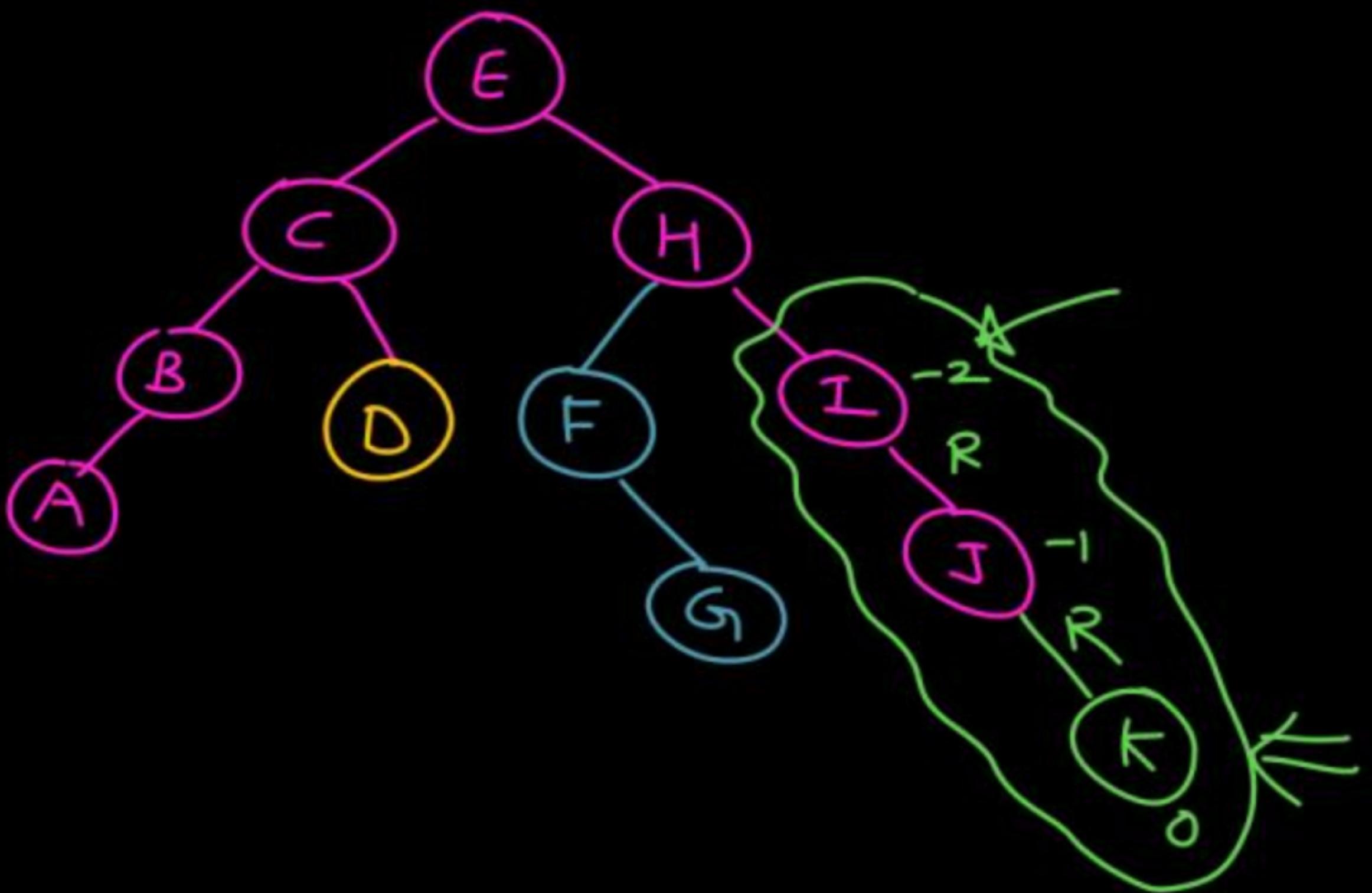
Q2

H, I, J, B, A, E, C, F, D, G, K, L

C, E, H



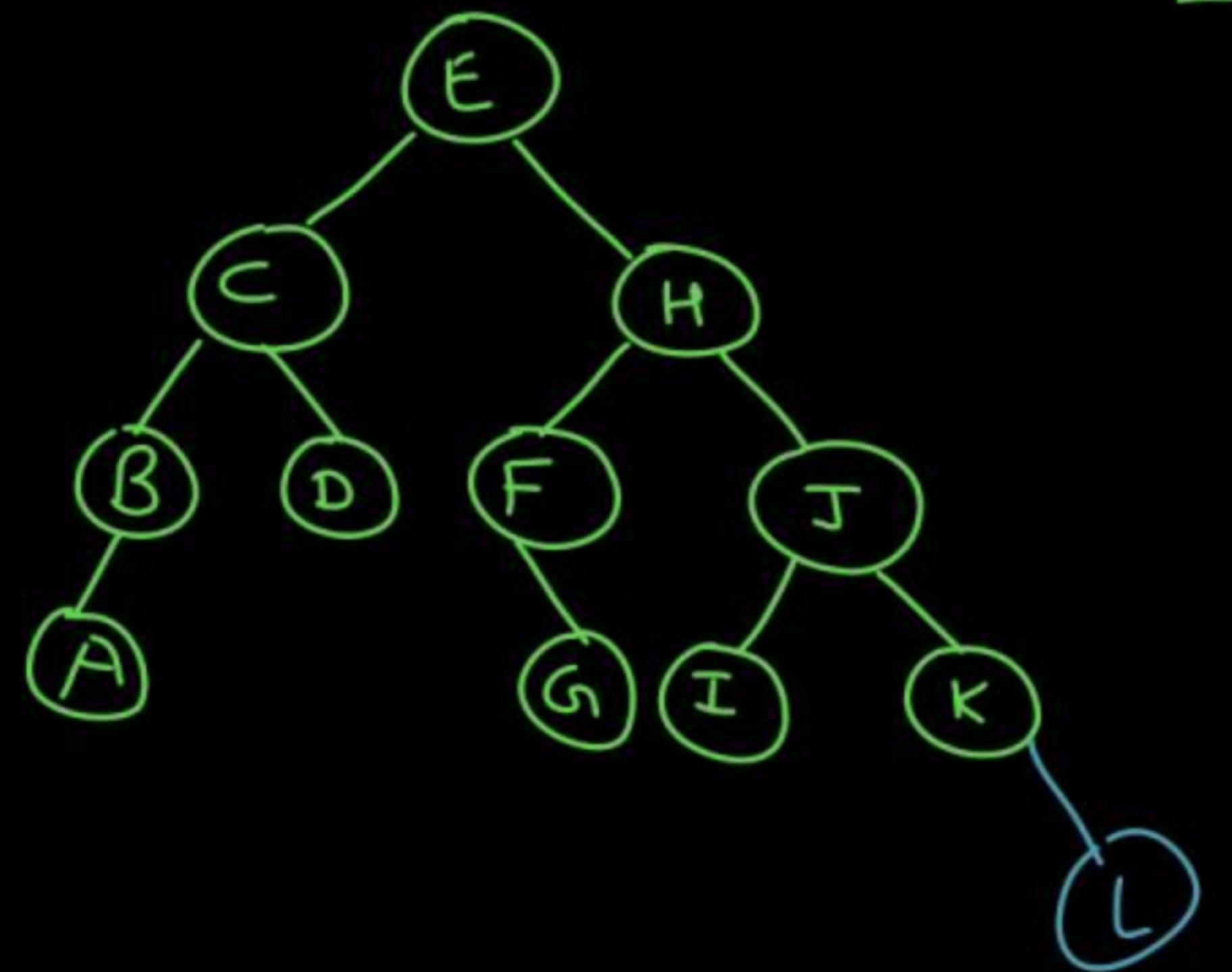
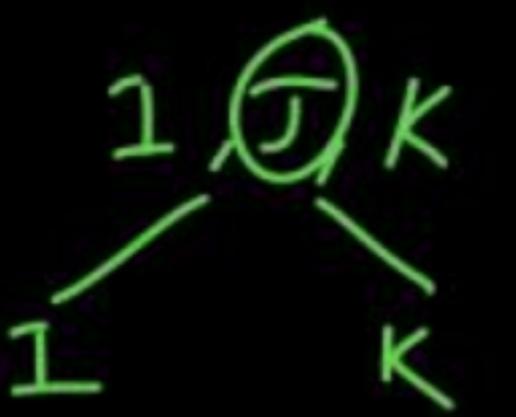
RR
rotation



Q2:

H, I, J, B, A, E, C, F, D, G, K, L

C, E, H

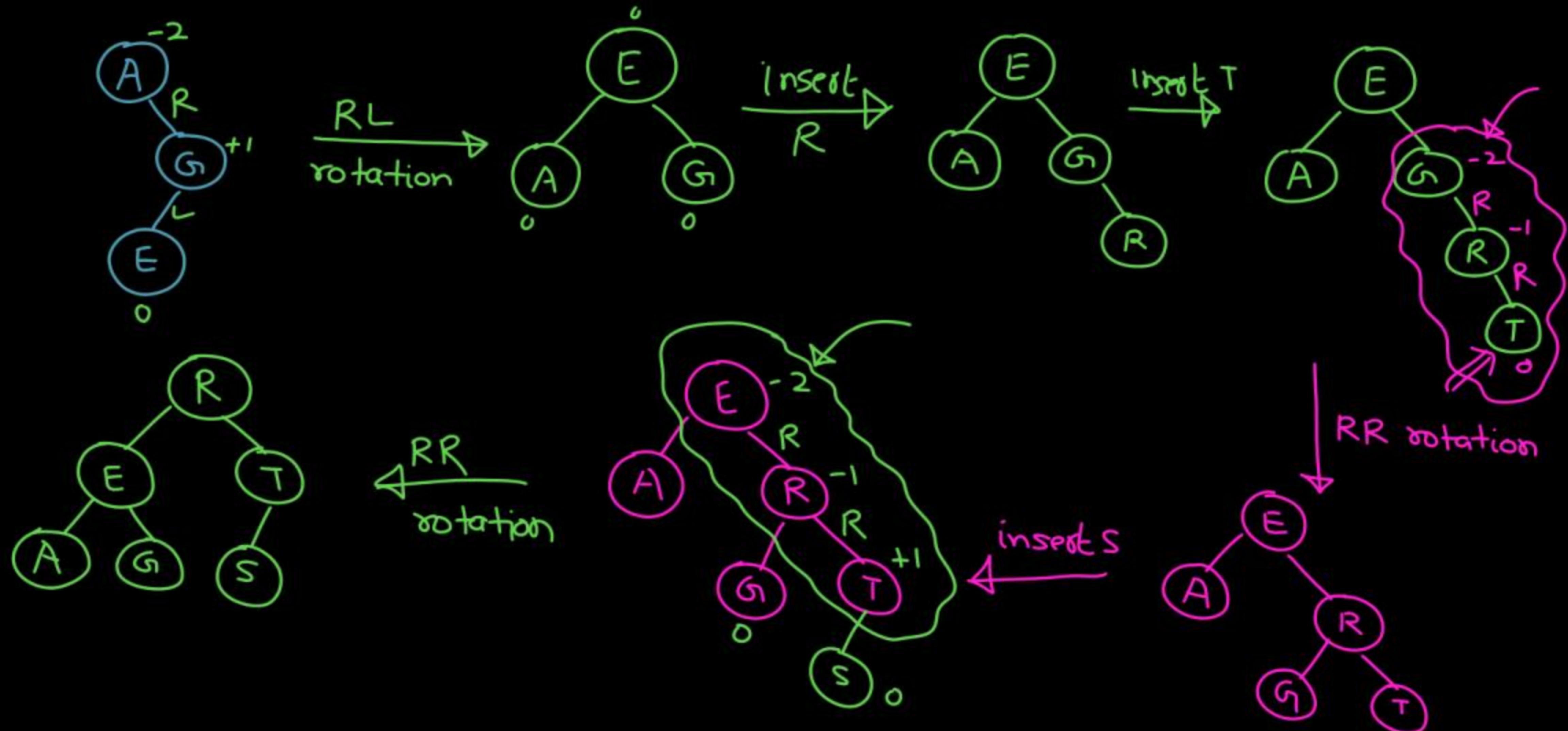


Q3.

A G E R T S P Q W C M D X

A, E, G

G(R)T

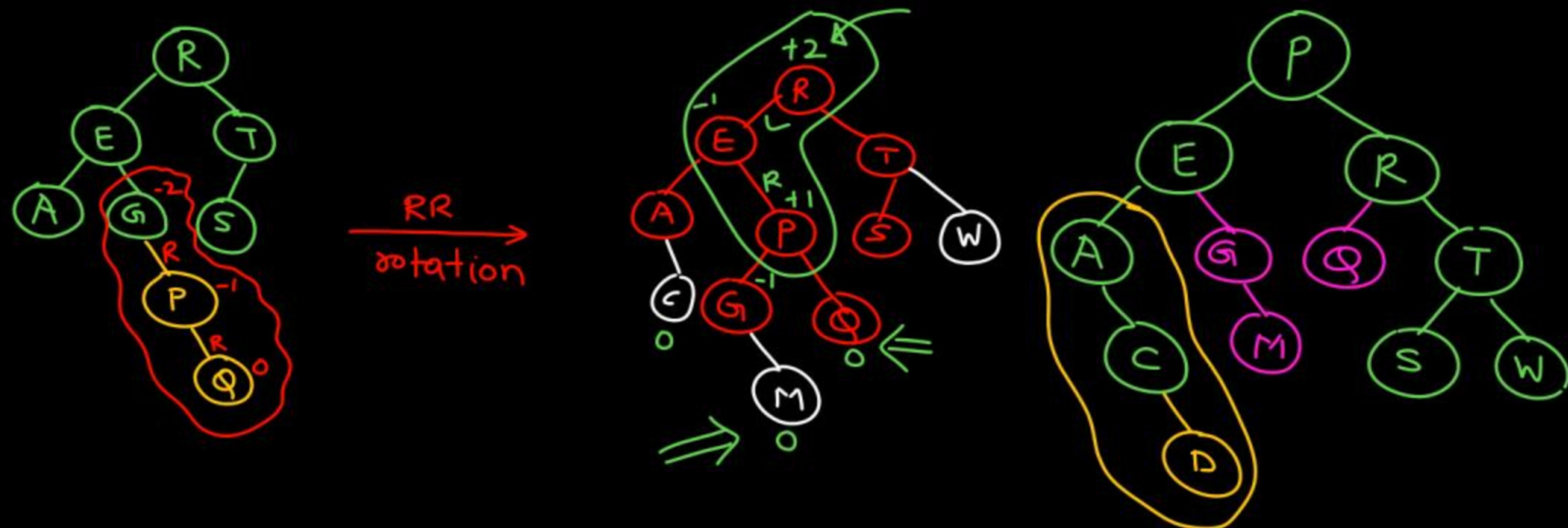


Q3.

A G E R T S P Q W C M D X

A, E, G

E, P, R

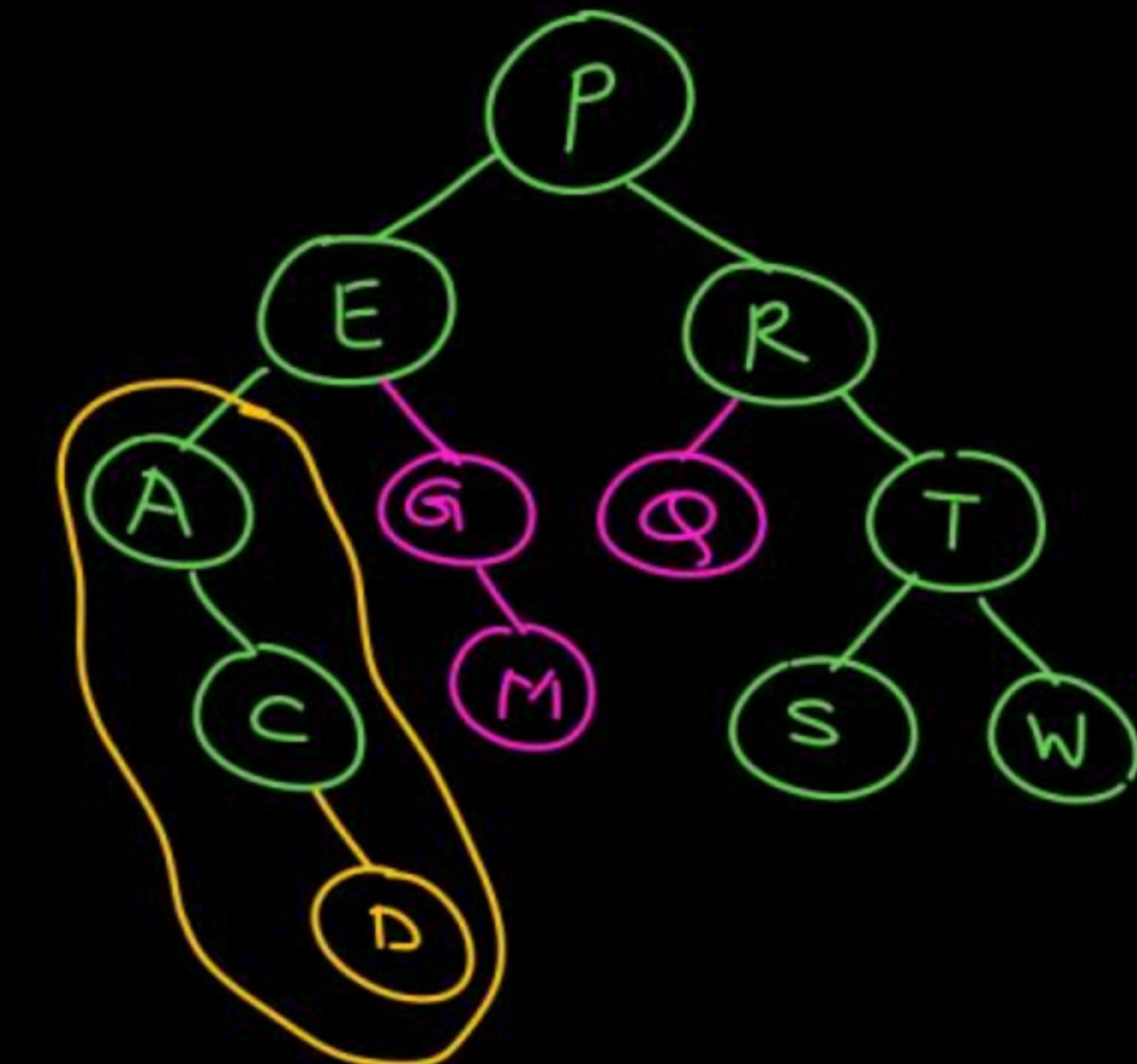
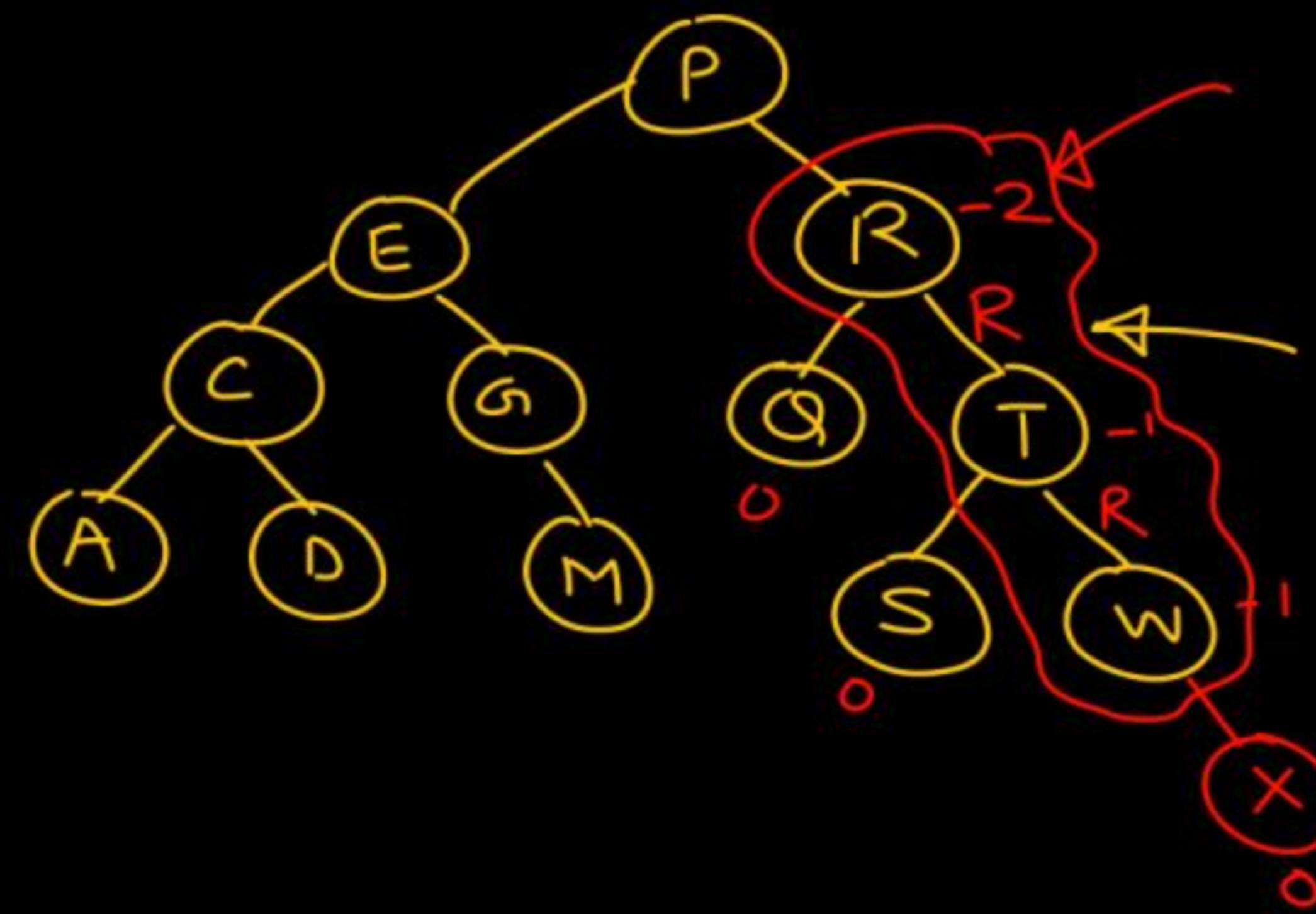


Q3

A G E R T S P Q W C M D X

A, E, G

E, P, R



100% → 99.99% → 1000%

E, P, R

Q3.

A G E R T S P Q W C M D X

A, E, G

