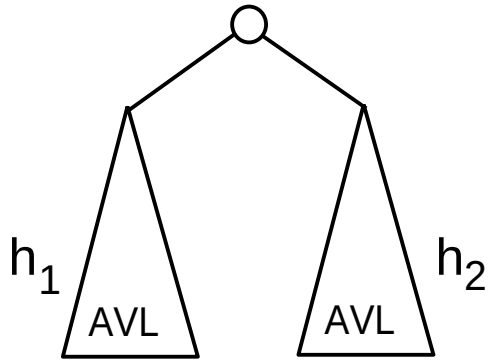
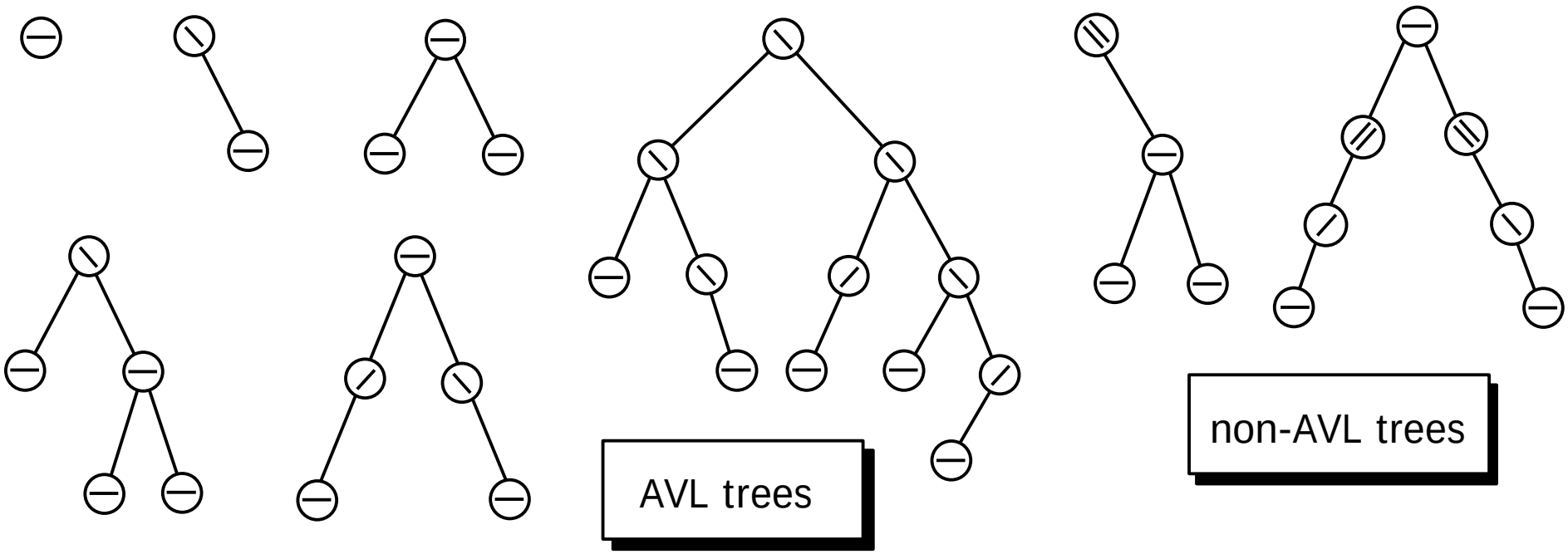
AVL TREES

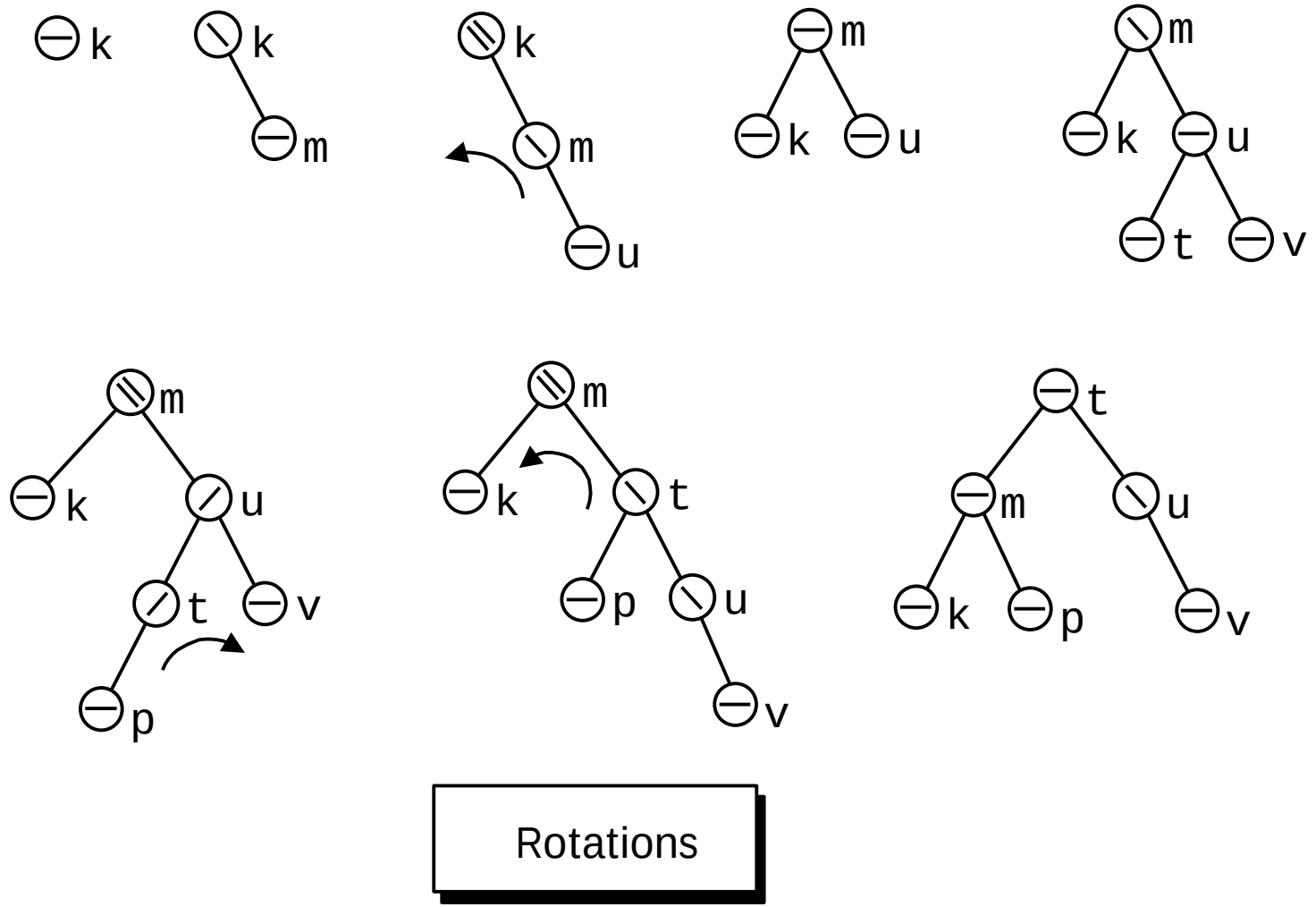
Height Balance : AVL Trees



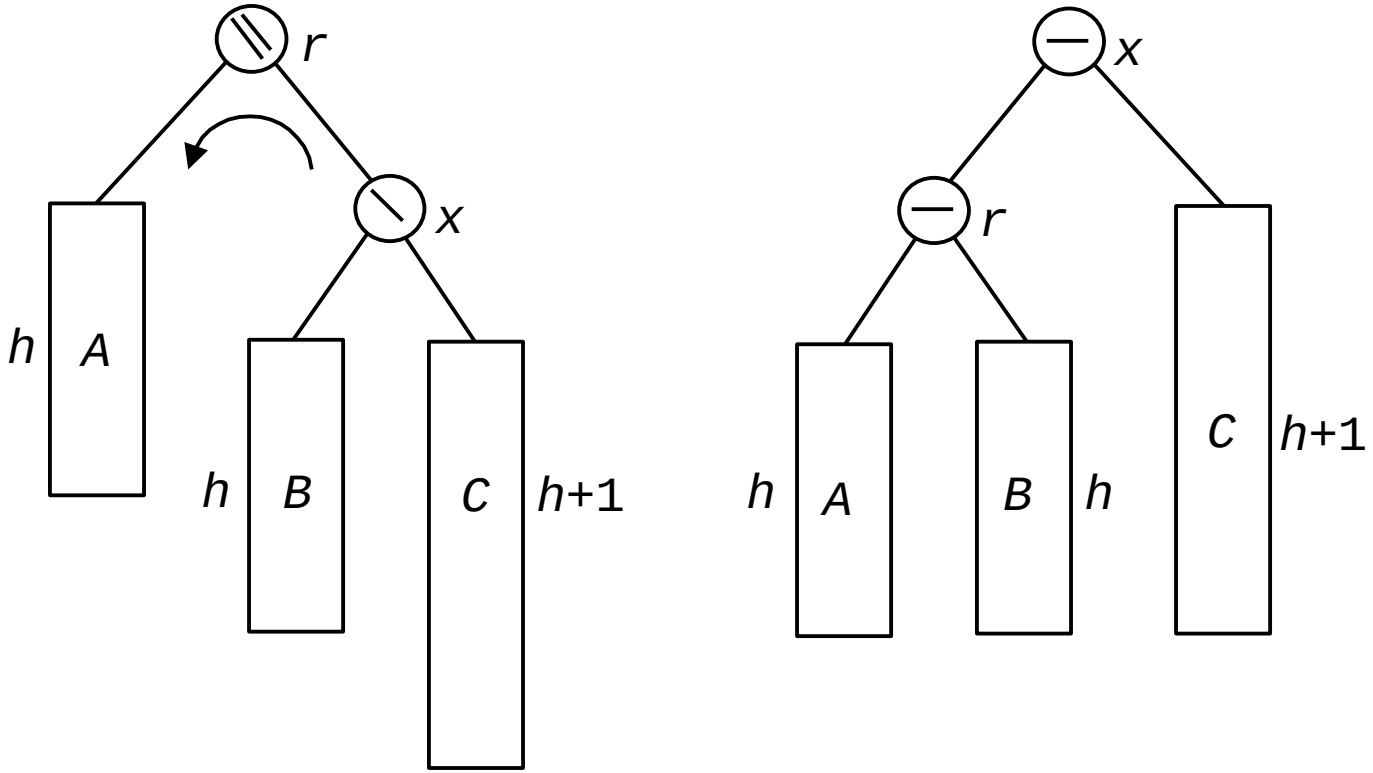
$| h_1 - h_2 | \leq 1$



AVL Trees : Insertion



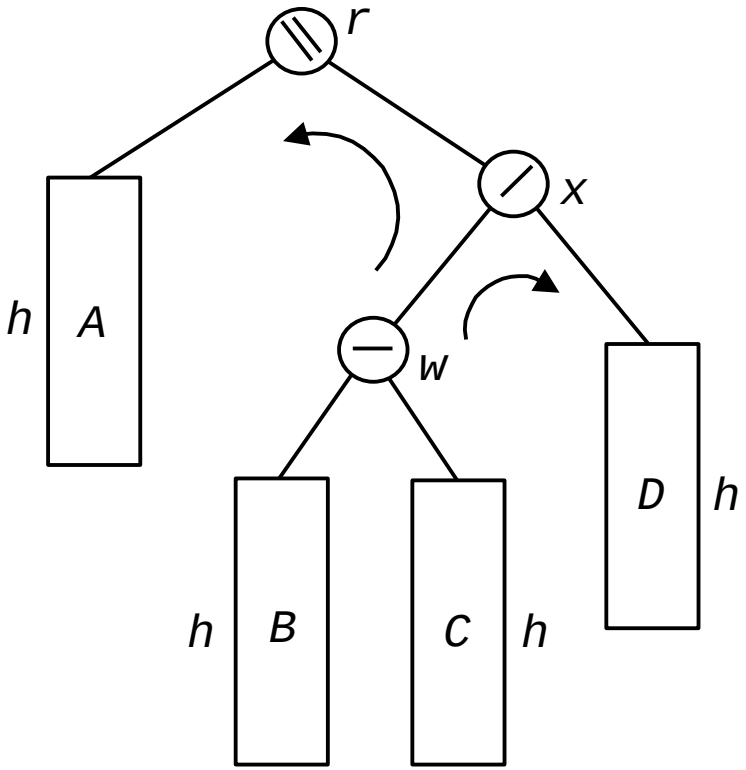
Rotations : Right High (Left Rotation)



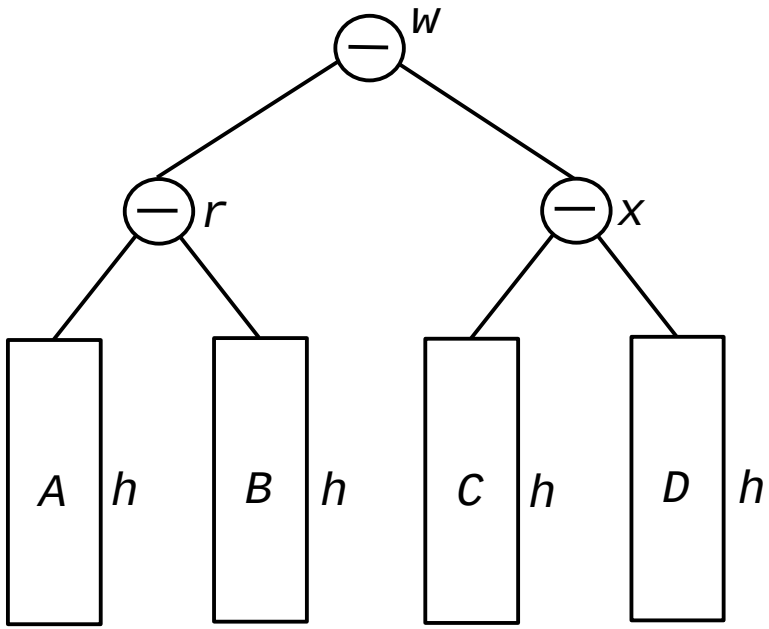
Total height = h+3

Total height = h+2

Rotations : Left High (Double Rotation)

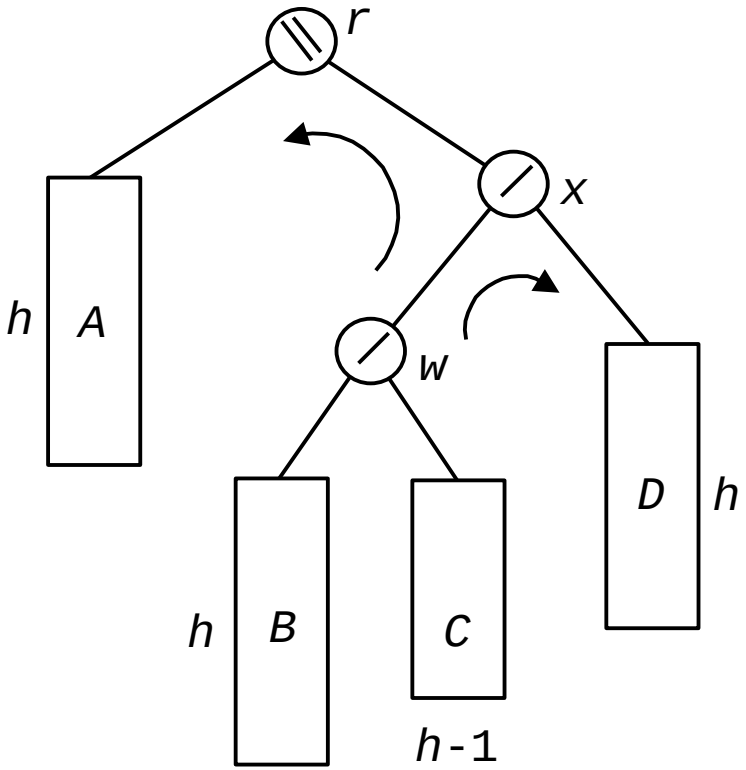


Total height = *h*+3

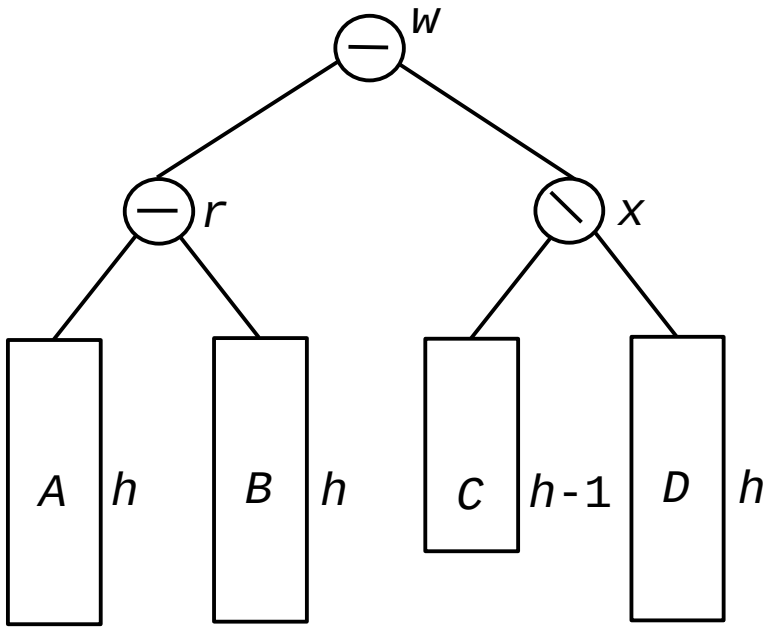


Total height = *h*+2

Rotations : Left High (Double Rotation)

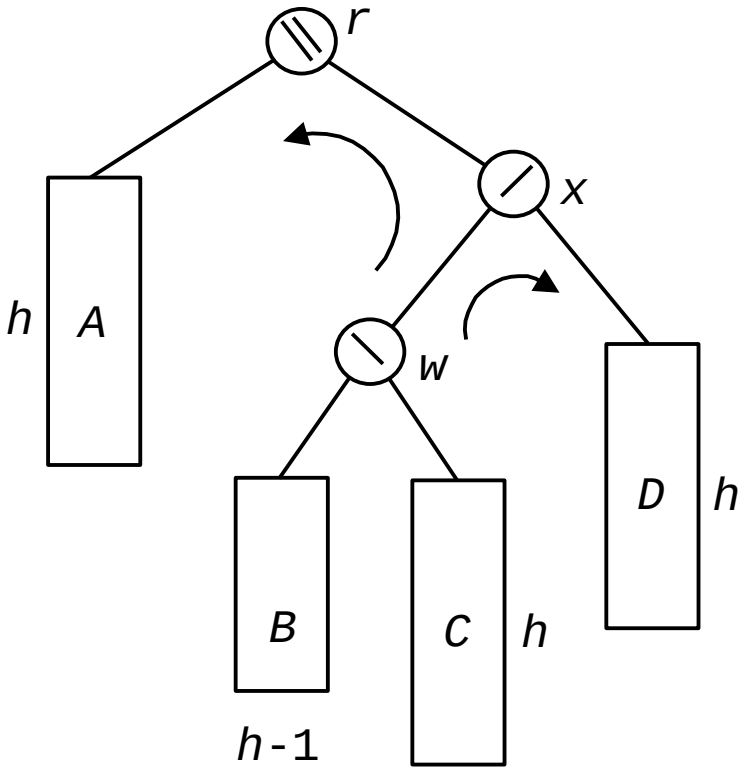


Total height = *h*+3

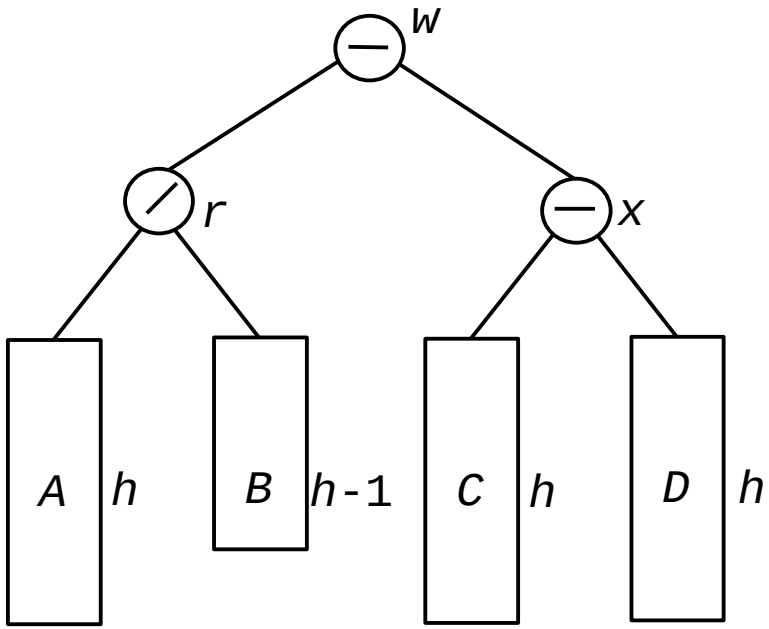


Total height = *h*+2

Rotations : Left High (Double Rotation)

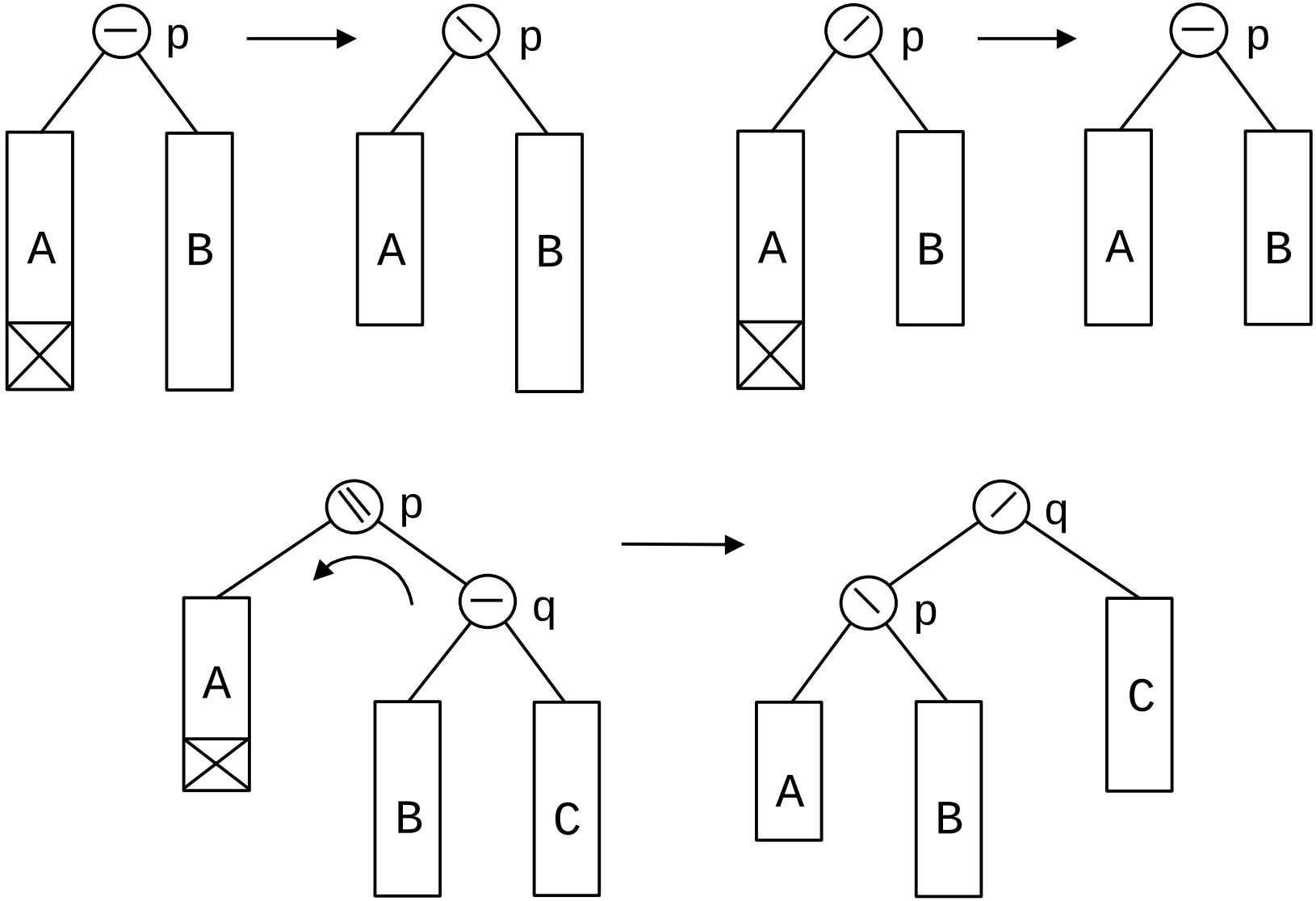


Total height = *h*+3

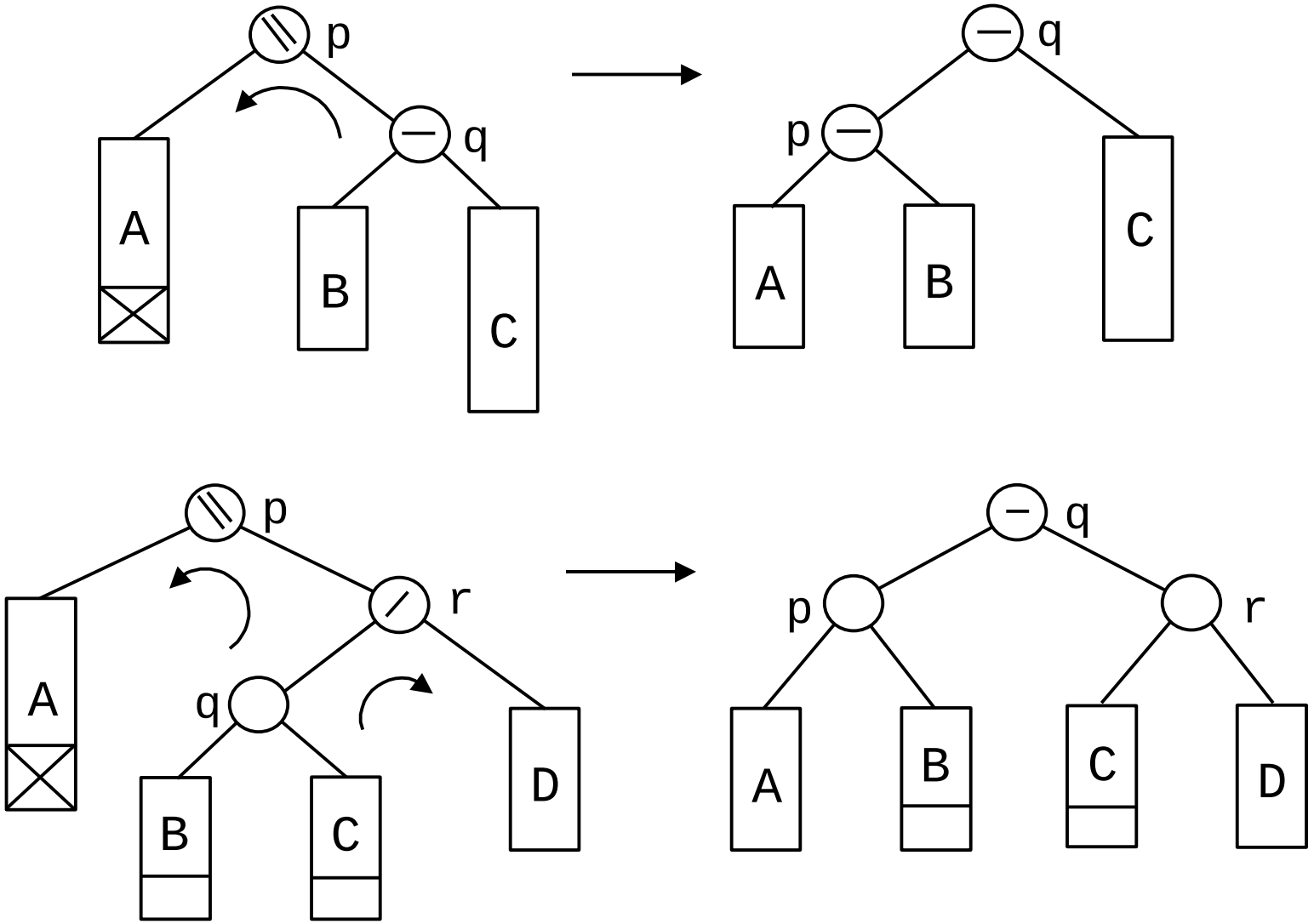


Total height = *h*+2

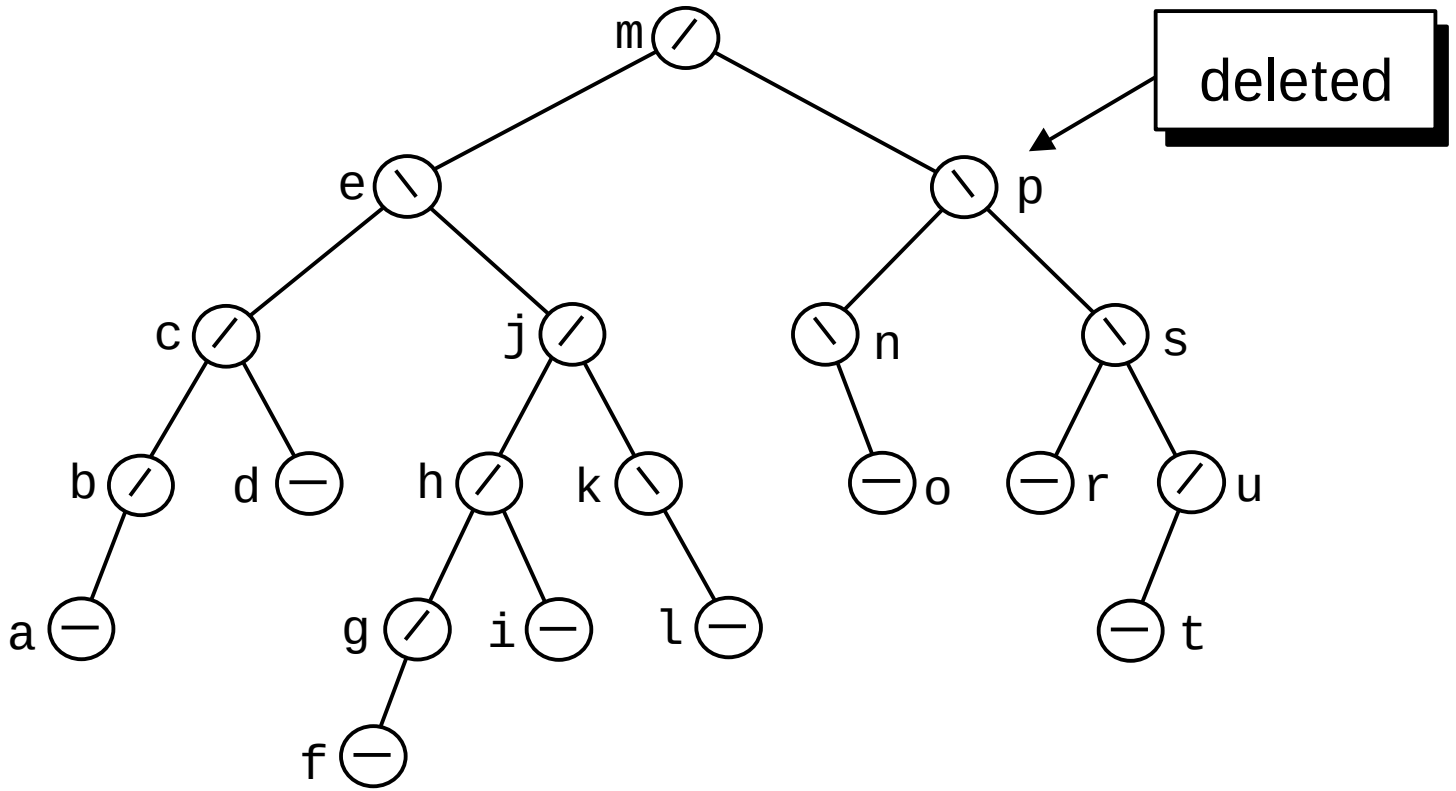
Deletion from an AVL Tree



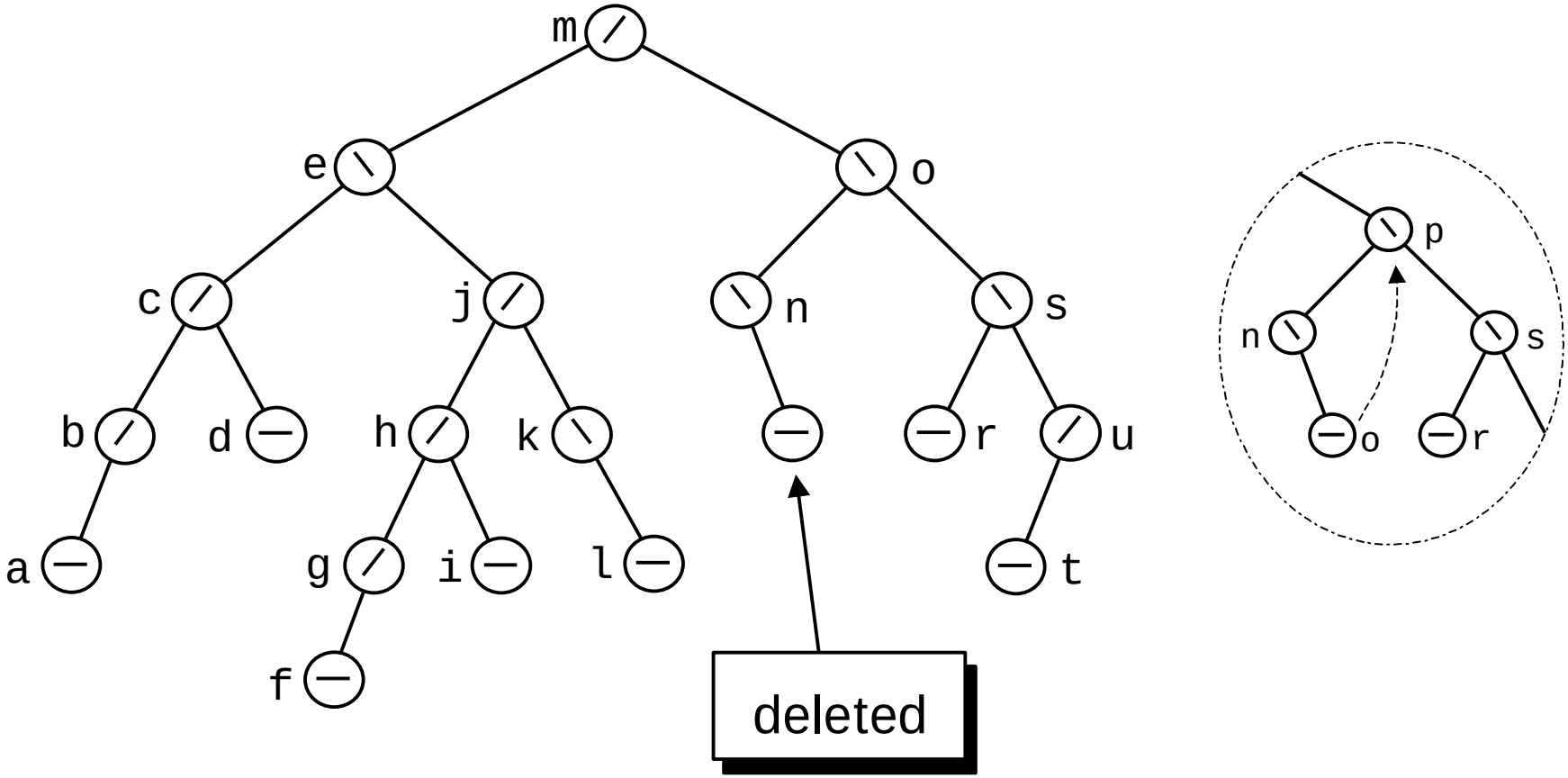
Deletion from an AVL Tree



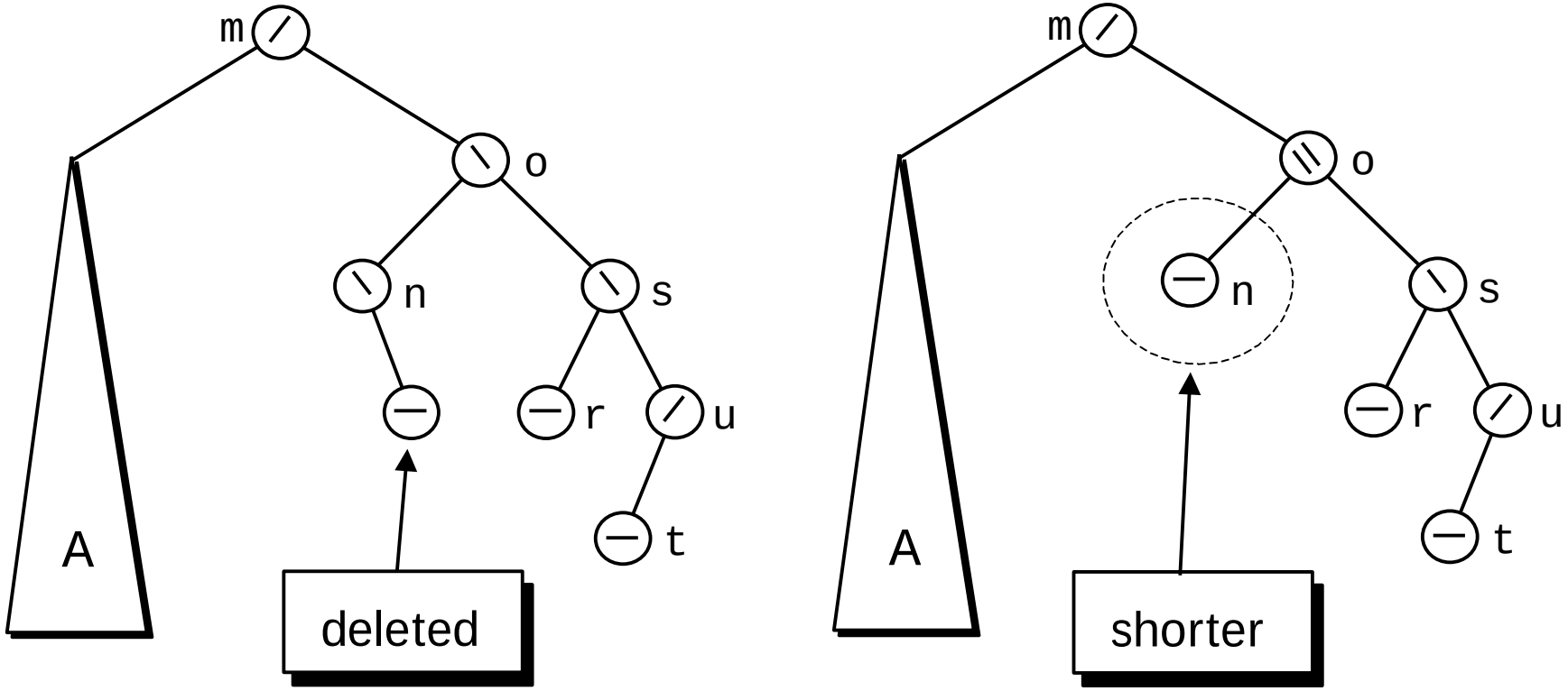
Deletion : Example



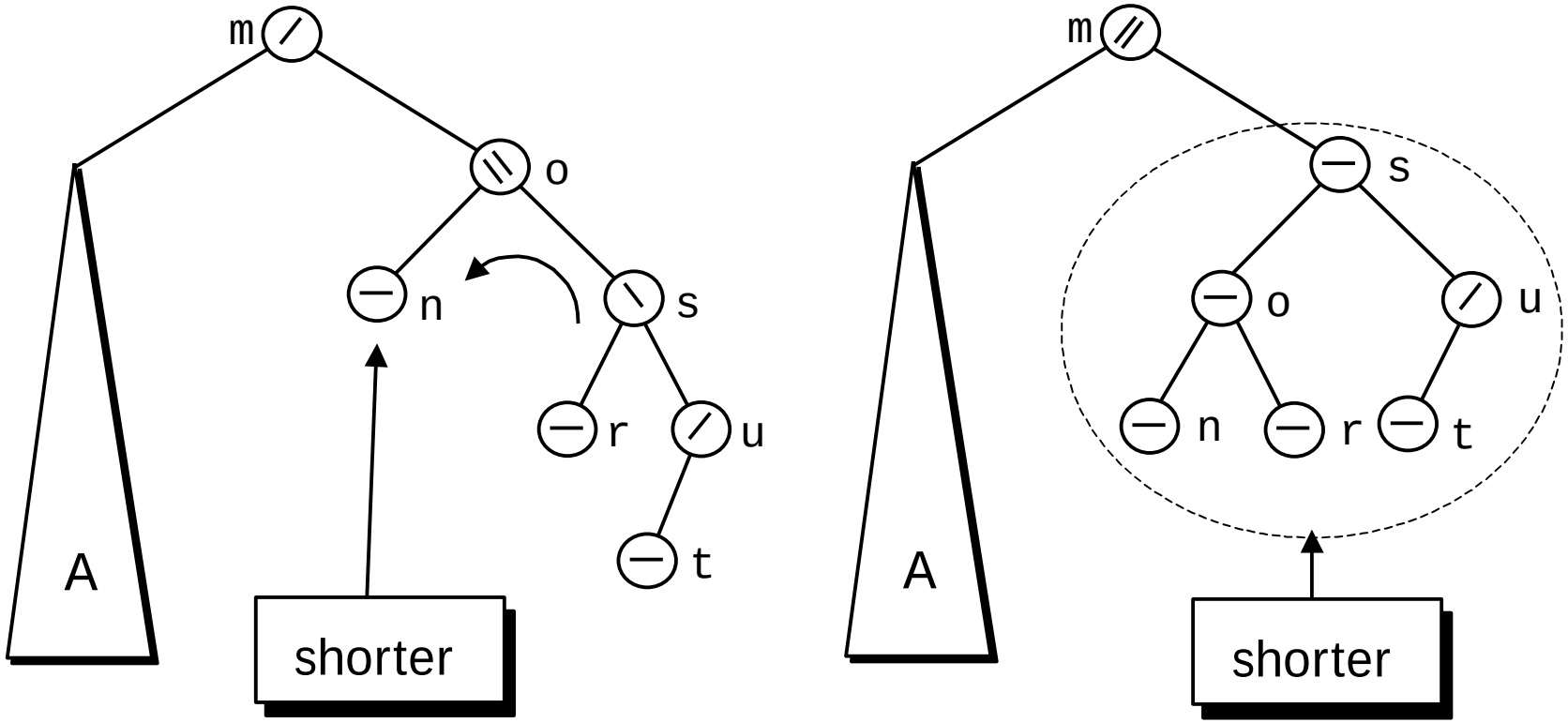
Deletion : Example



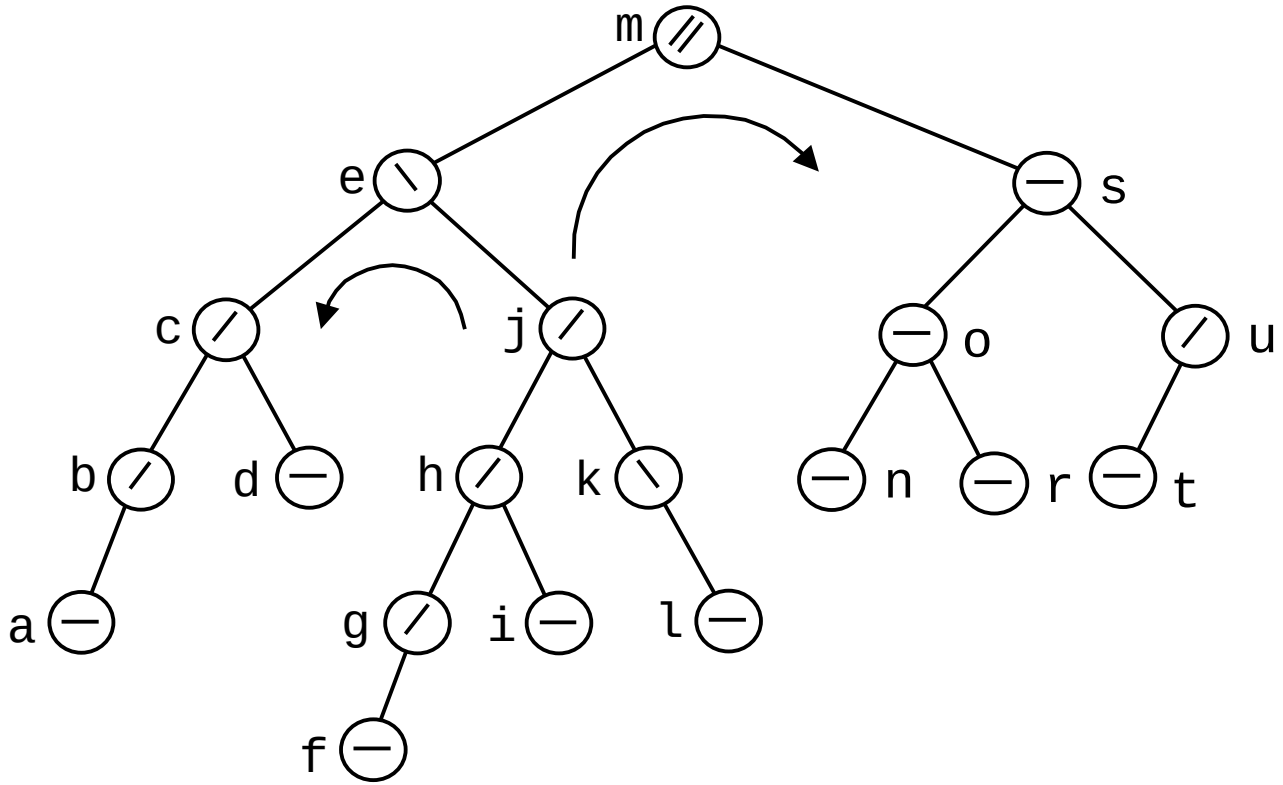
Deletion : Example



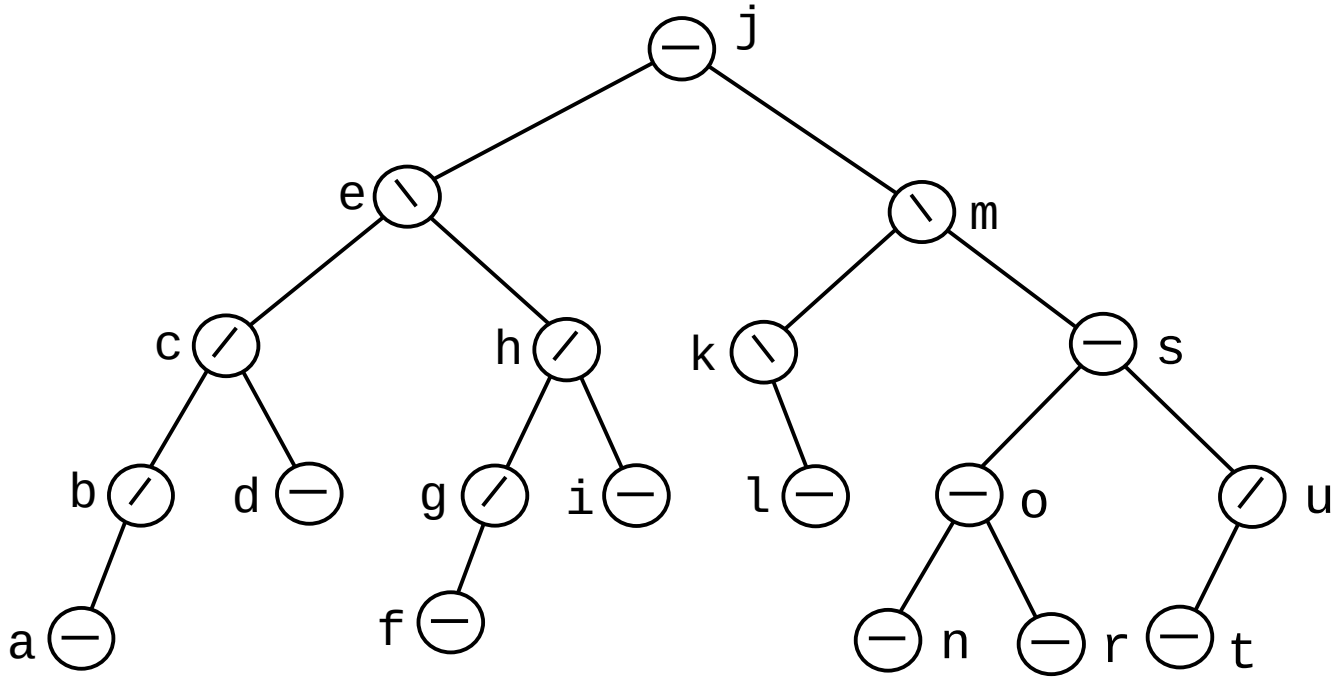
Deletion : Example



Deletion : Example

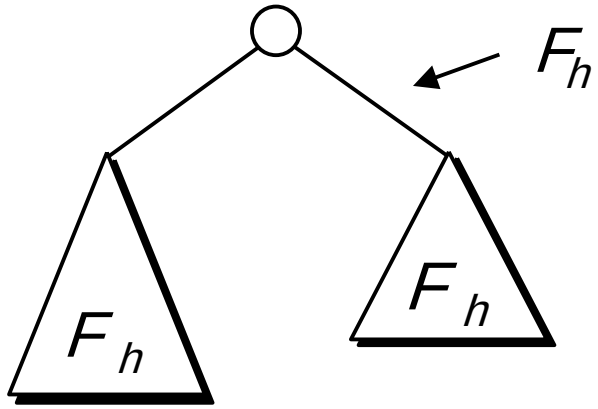


Deletion : Example



The Height of an AVL Tree

กำหนดให้ F_h คือ AVL tree ที่มีความสูง h ที่มีจำนวน nodes น้อยที่สุด
และให้ $|F_h|$ คือจำนวน nodes ของต้นไม้ F_h



Fibonacci Tree

$$F_h$$

worst-case bound