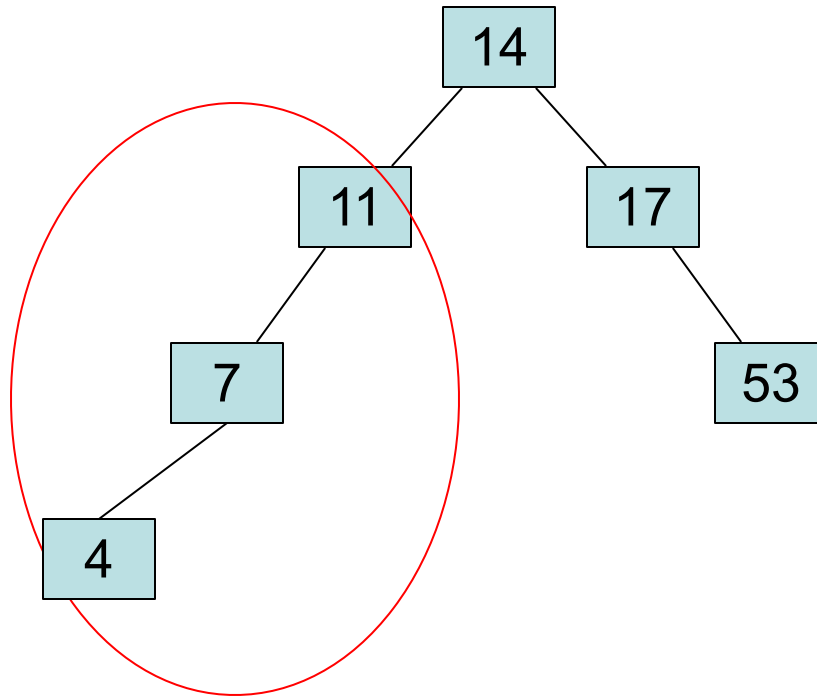


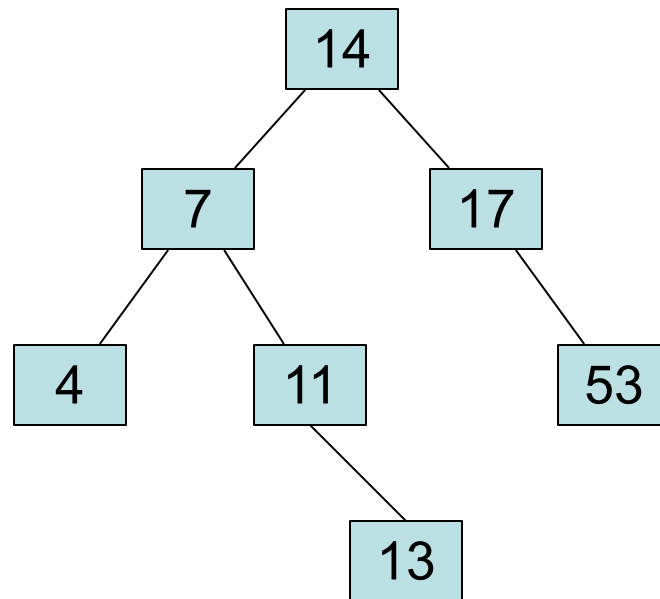
AVL Tree Example:

- Insert 14, 17, 11, 7, 53, 4, 13 into an empty AVL tree



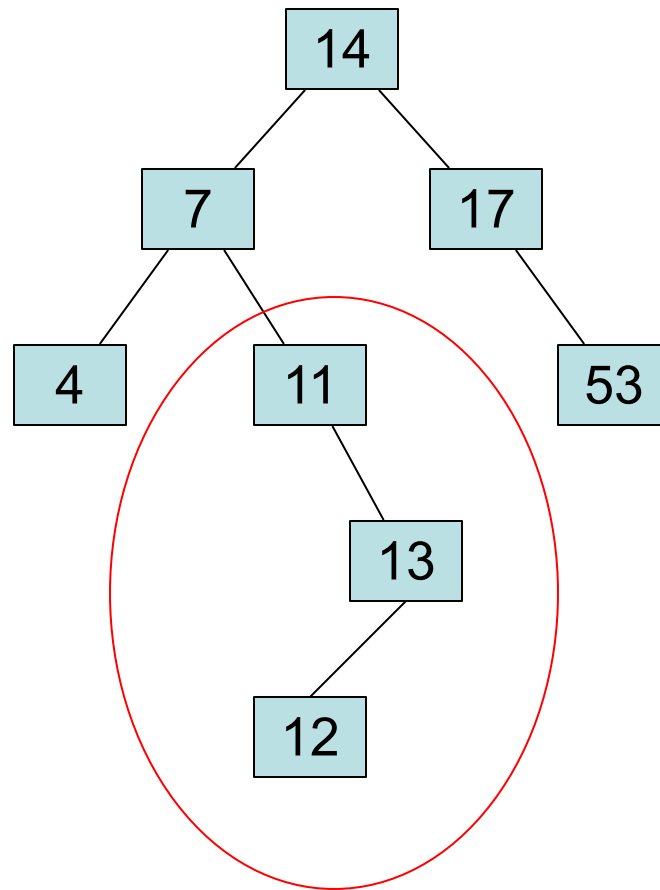
AVL Tree Example:

- Insert 14, 17, 11, 7, 53, 4, 13 into an empty AVL tree



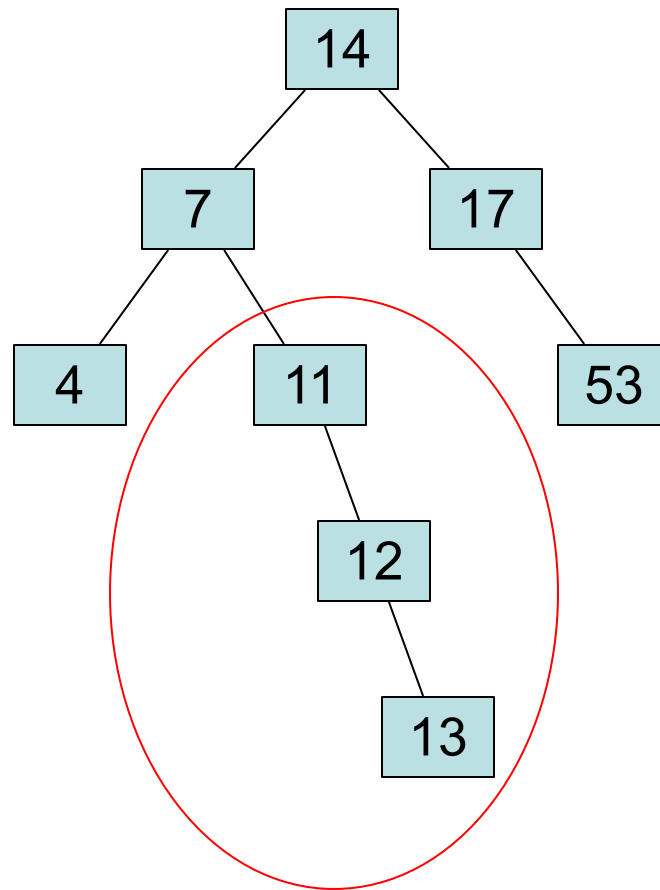
AVL Tree Example:

- Now insert 12



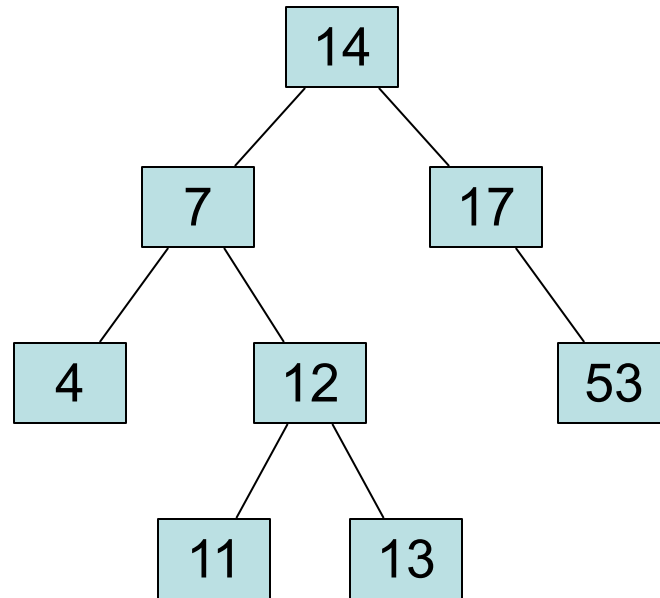
AVL Tree Example:

- Now insert 12



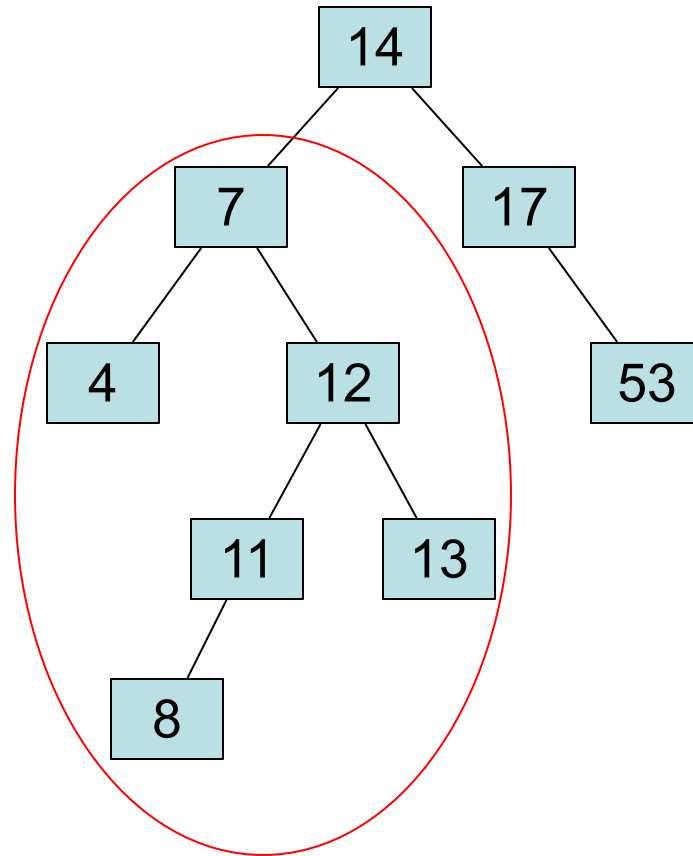
AVL Tree Example:

- Now the AVL tree is balanced.



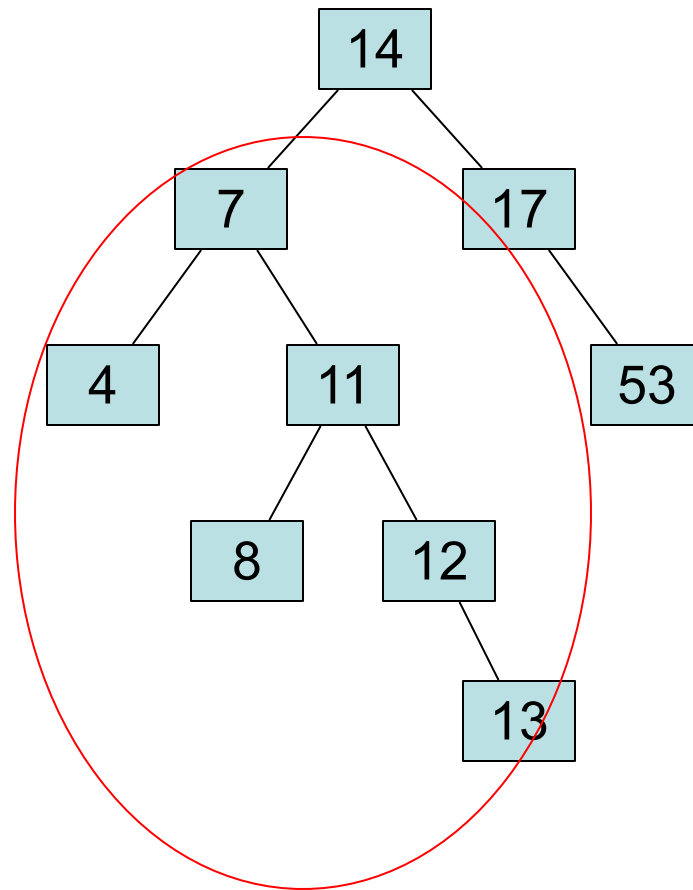
AVL Tree Example:

- Now insert 8



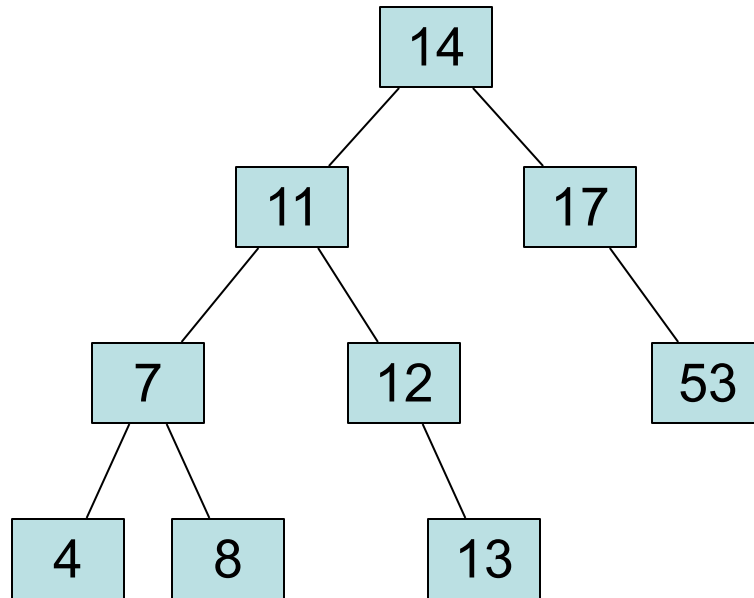
AVL Tree Example:

- Now insert 8



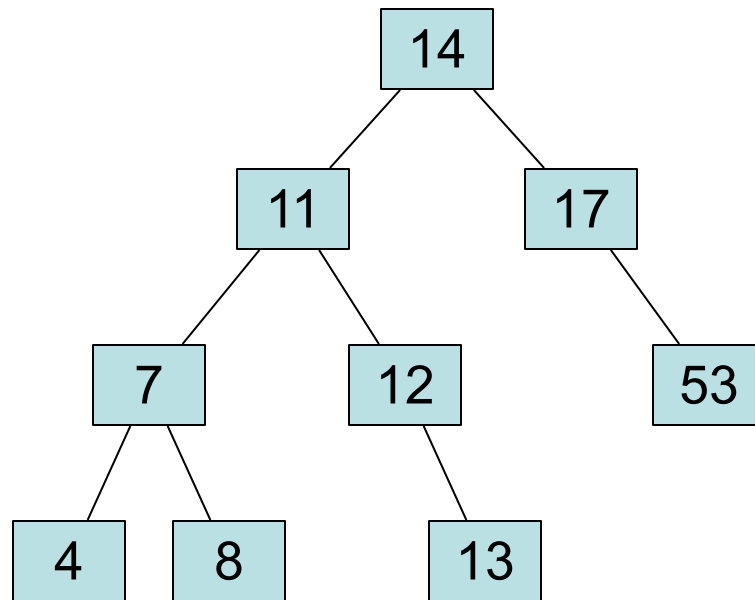
AVL Tree Example:

- Now the AVL tree is balanced.



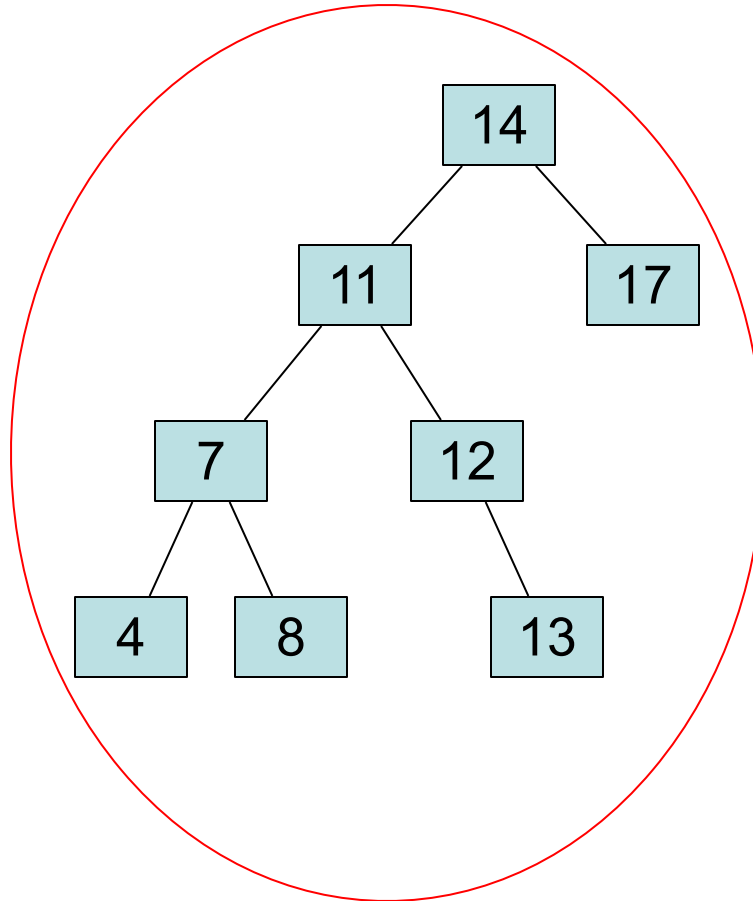
AVL Tree Example:

- Now remove 53



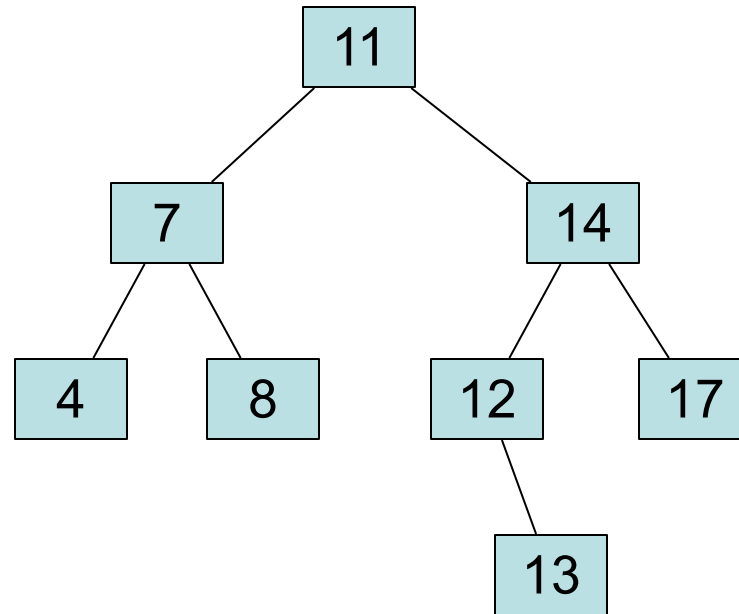
AVL Tree Example:

- Now remove 53, unbalanced



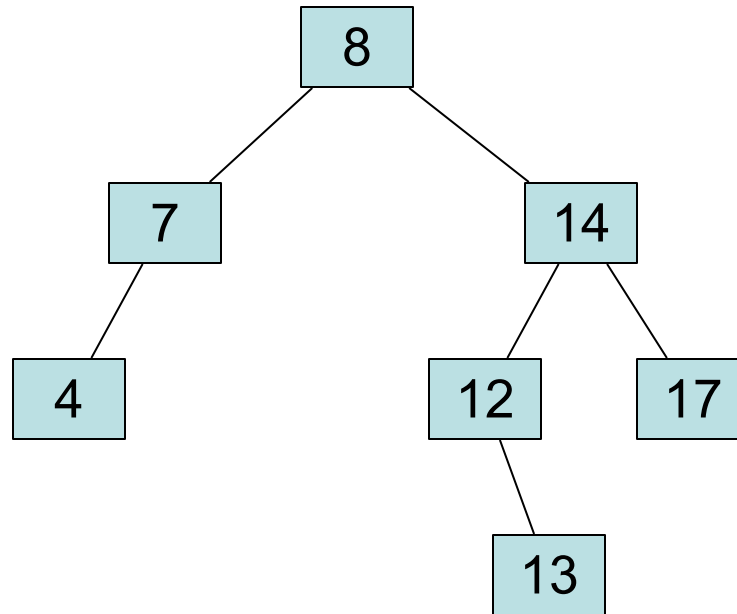
AVL Tree Example:

- **Balanced! Remove 11**



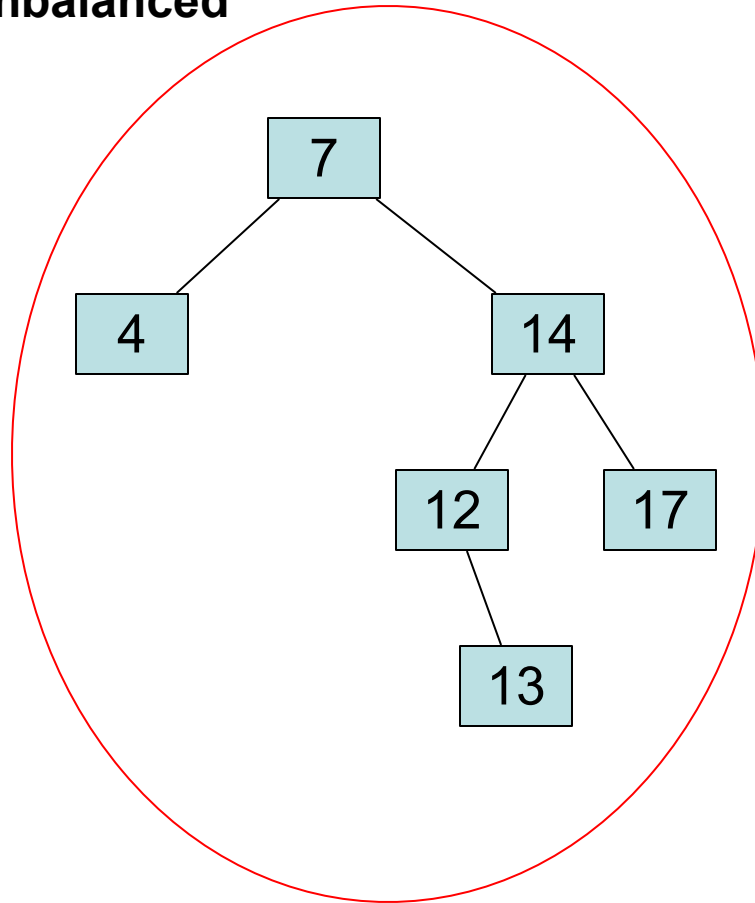
AVL Tree Example:

- Remove 11, replace it with the largest in its left branch



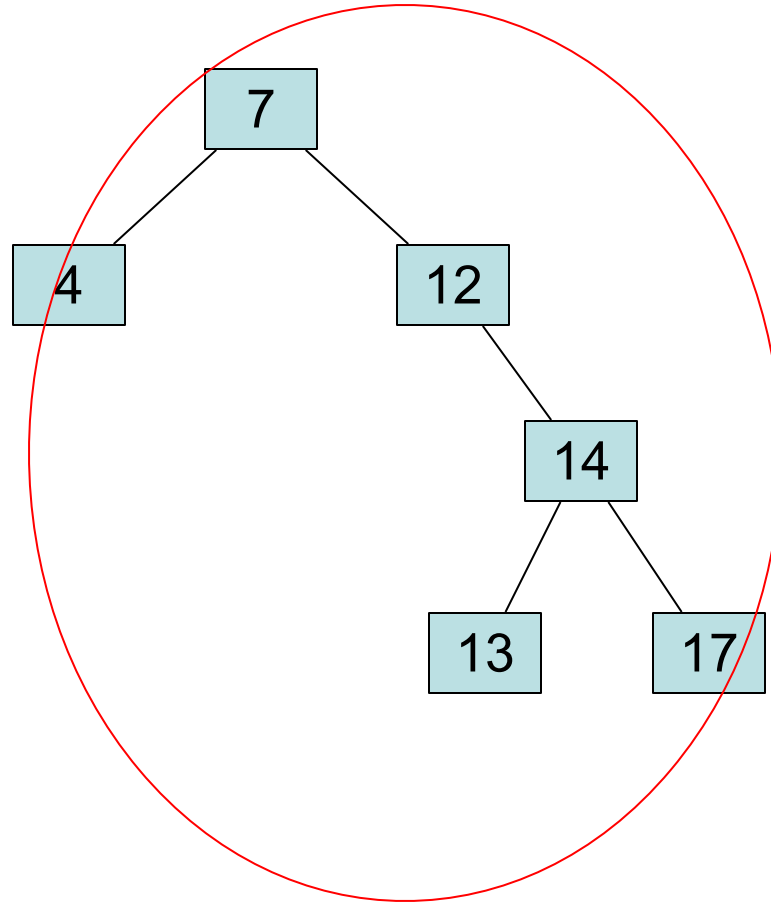
AVL Tree Example:

- Remove 8, unbalanced



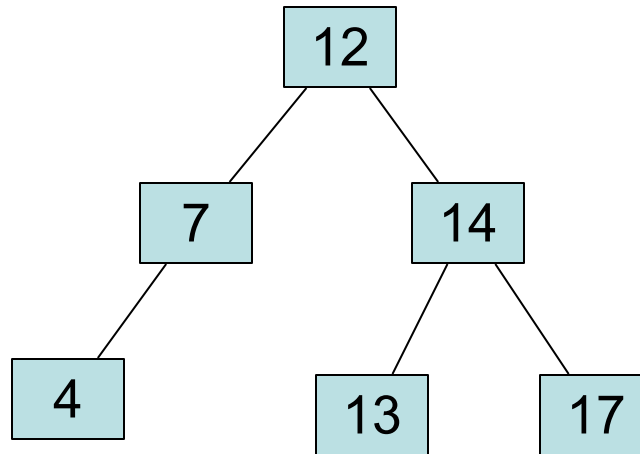
AVL Tree Example:

- Remove 8, unbalanced



AVL Tree Example:

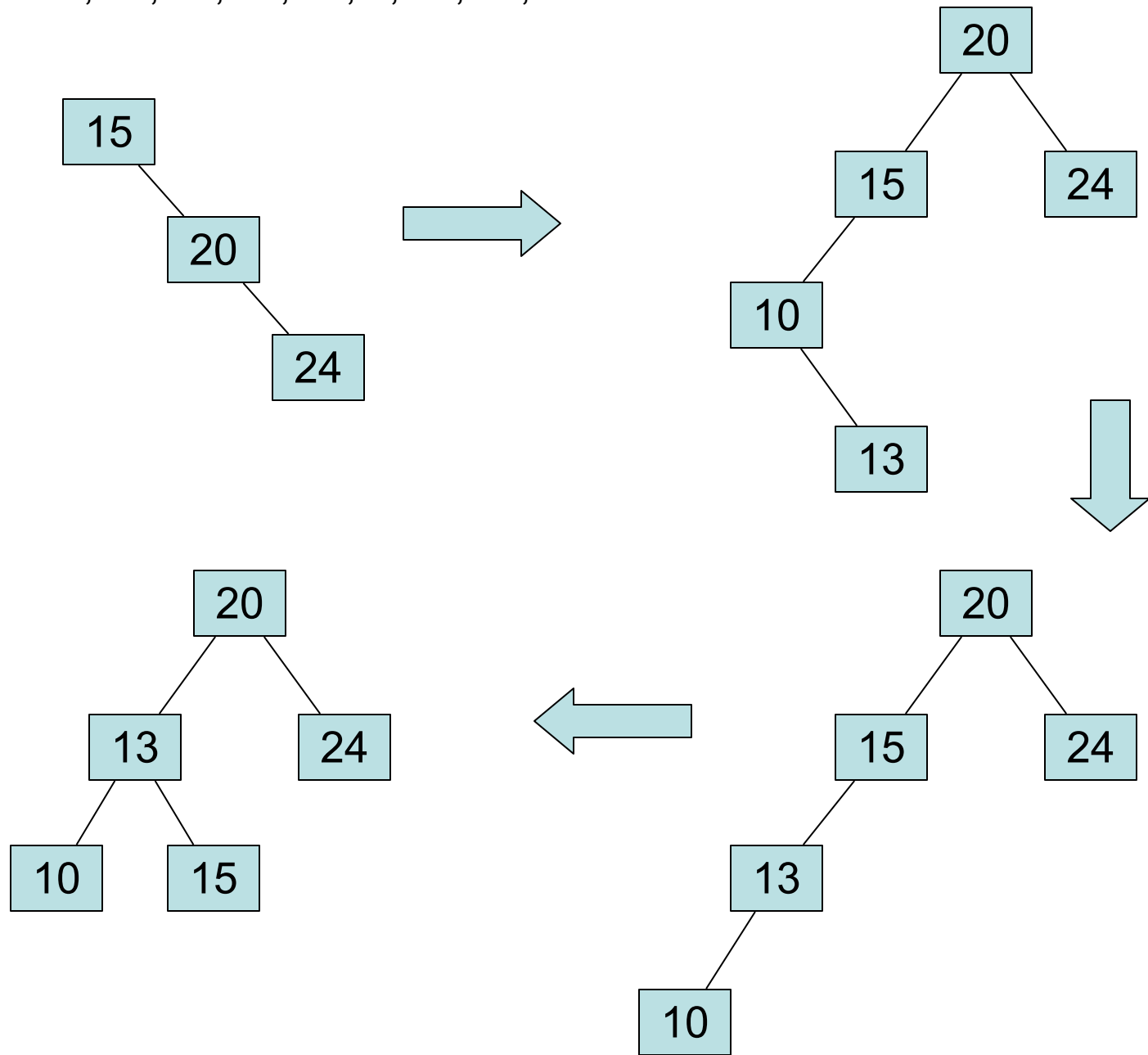
- **Balanced!!**



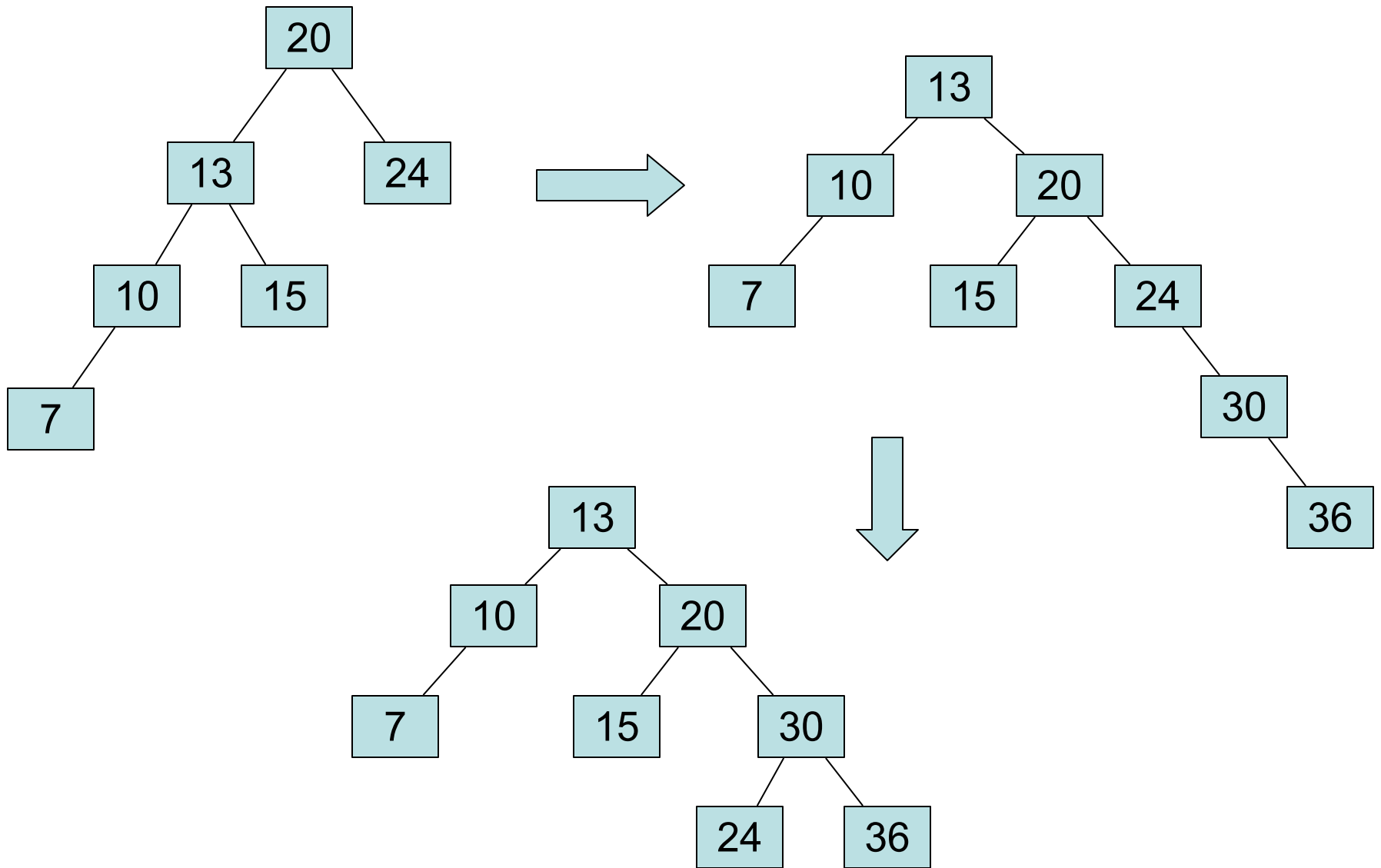
In Class Exercises

- Build an AVL tree with the following values:
15, 20, 24, 10, 13, 7, 30, 36, 25

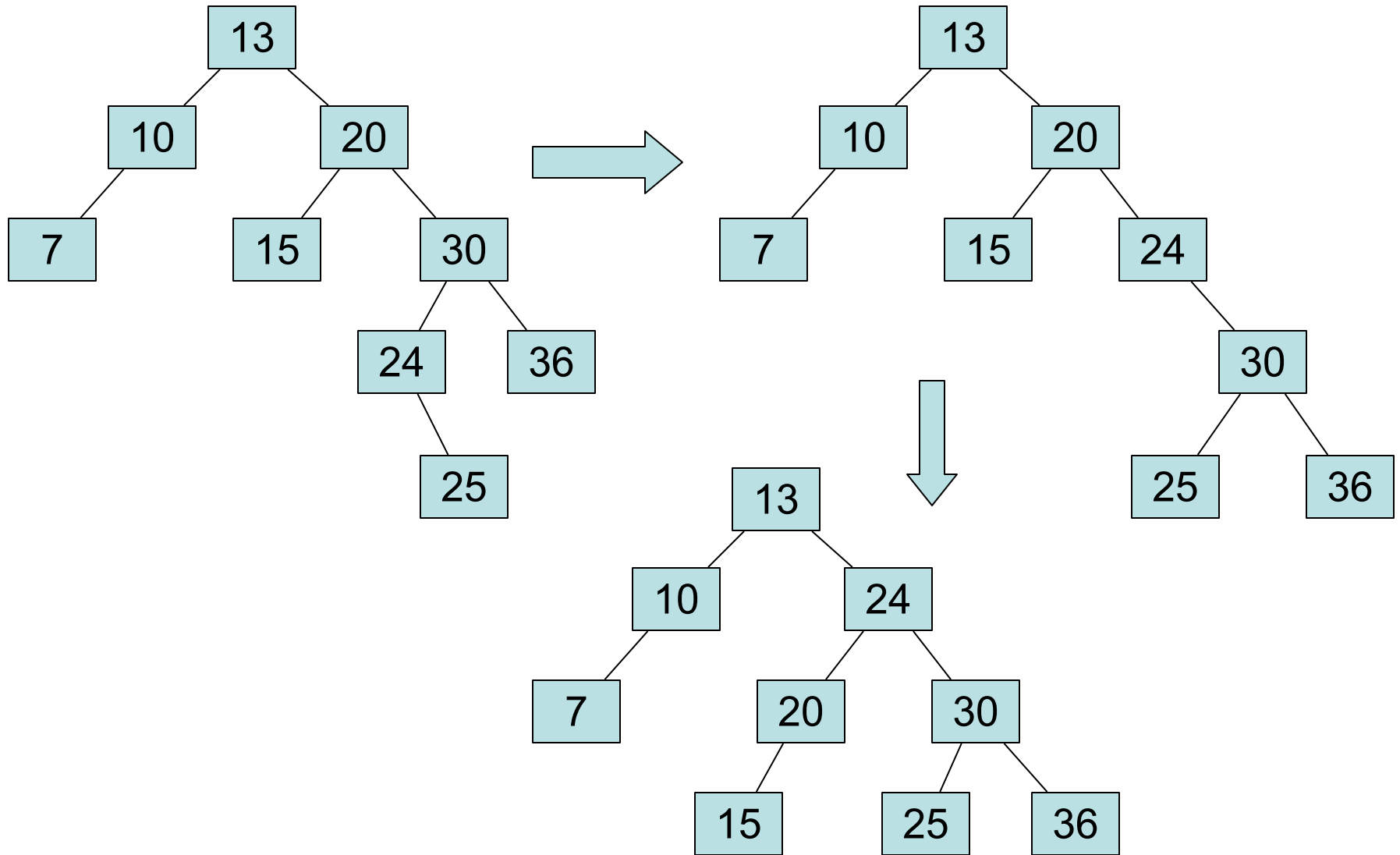
15, 20, 24, 10, 13, 7, 30, 36, 25



15, 20, 24, 10, 13, 7, 30, 36, 25



15, 20, 24, 10, 13, 7, 30, 36, 25



Remove 24 and 20 from the AVL tree.

