

Recurrence Relation Solving : Recursive Tree Method

Recursive Tree Method : If two or more recursive terms occur, then we use Recursive Tree Method.

Problem 1 :

$$T(n) = T(n/2) + T(n/2) + n$$

$$T(n) = O(n \cdot \log_2 n)$$

Problem 2 :

$$T(n) = T(n/5) + T(4n/5) + n$$

$$T(n) = O(n \cdot \log_{5/4} n)$$

Problem 3 :

$$T(n) = T(n/5) + T(3n/5) + n$$

$$T(n) = O(n)$$