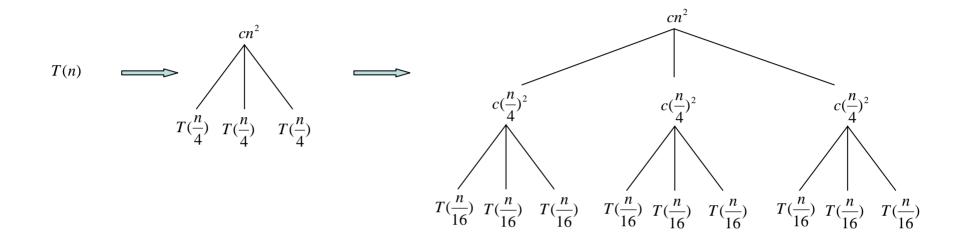
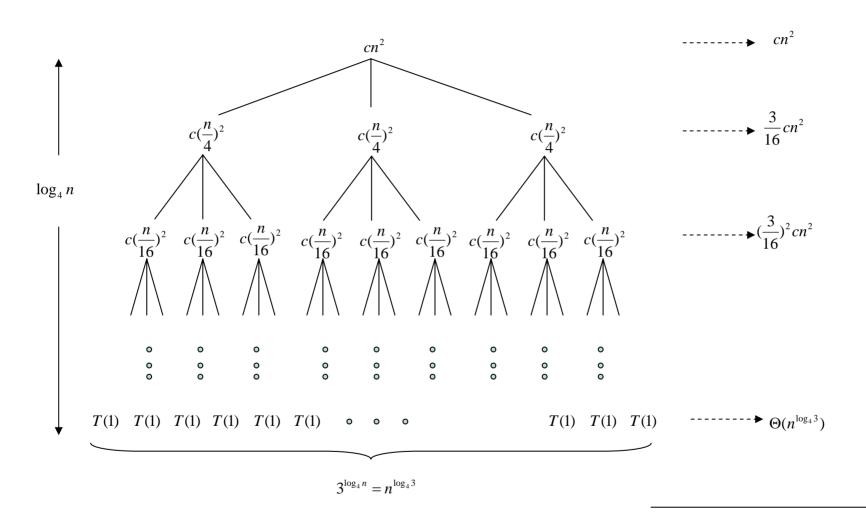
## Constructing the recursion tree

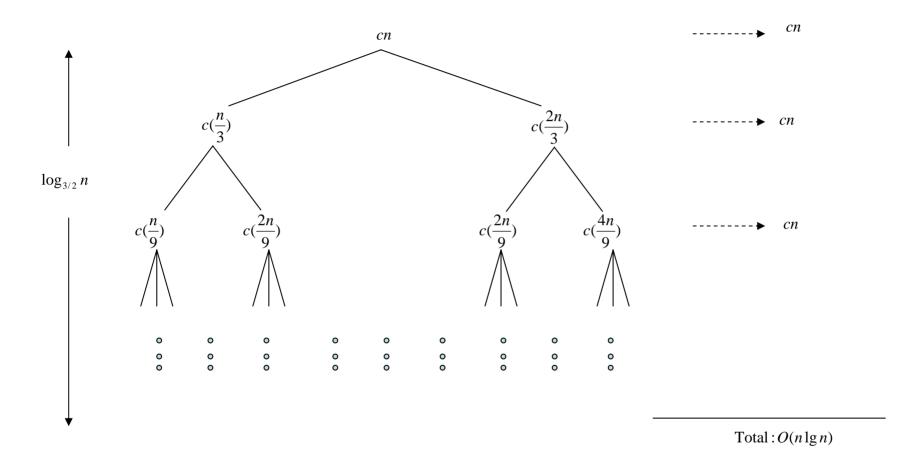


## Constructing the recursion tree



Total:  $O(n^2)$ 

## Recursion tree for T(n) = T(n/3)+T(2n/3)+cn



This is not a complete binary tree There are fewer than  $2^{\log_{3/2} n} = n^{\frac{\log_{3/2} n}{2}} \in w(n \log n)$  leaves