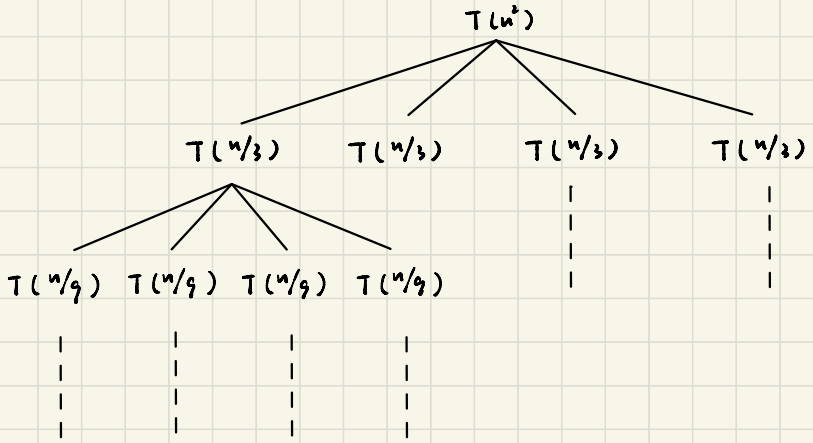
C)

$T(n) \leq 4T(n/3) + O(n^2)$



level 1 = $C \cdot n$

level 2 = $4 \cdot n^2/3^2 = 4/9\, C \cdot n^2$

level 3 = $16 \cdot n^2/9^2 = 16/81\, C \cdot n^2$

depth of tree = $\log_3 n$

$$T(n) = (n^2 + 4/9 \cdot n^2 + (4/9)^2 \cdot n^2 + \cdots + (4/9)^{k-1} \cdot n^2) \cdot \log_3 n$$

$$= \left(\frac{1}{1 - 4/9}\right) \cdot n^2 \cdot \log_3 n$$

$$= 9/5\, C \cdot n^2 \cdot \log_3 n$$

$$= O(n^2 \cdot \log n)$$