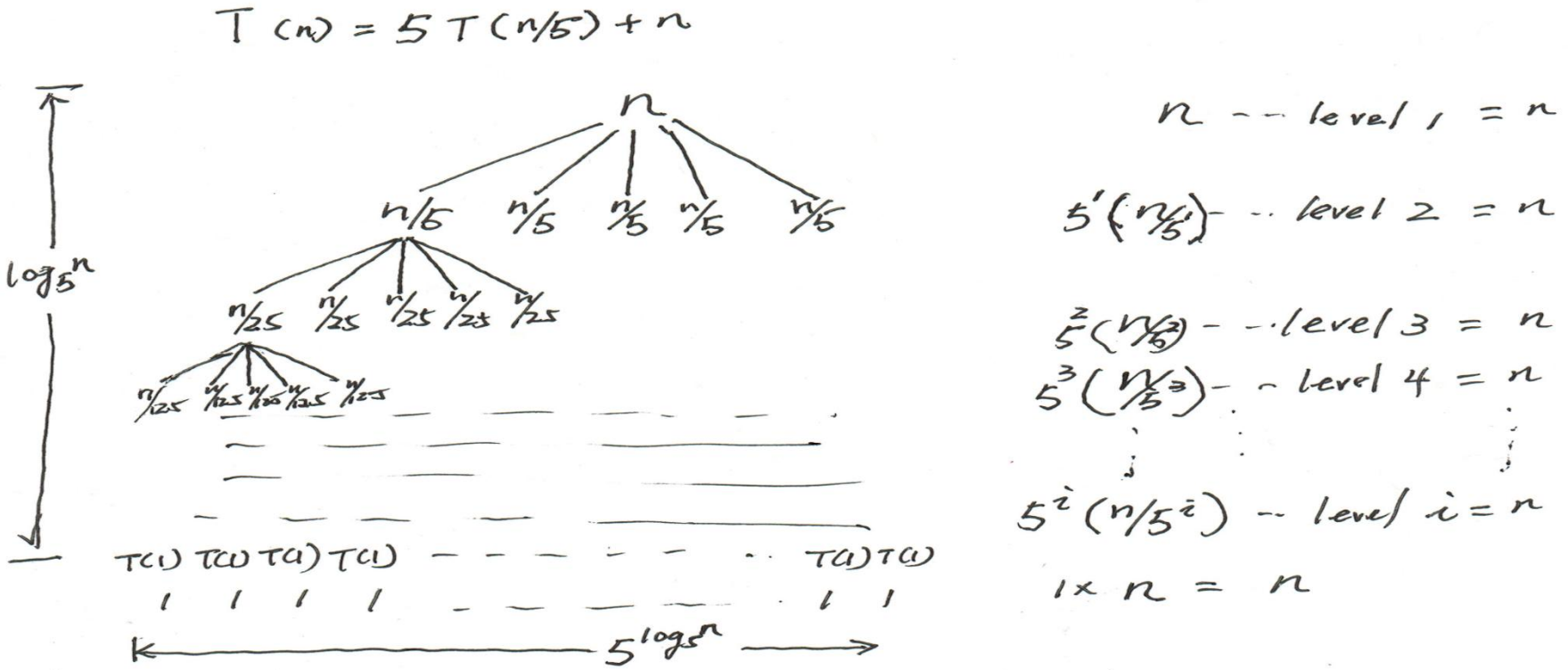
The running time of an algorithm can be described by the equation

T(n) = 5T(n/5) + n. Draw a Recursion Tree to find the exact function T(n) and measure the run time complexity big O for T(n).

Answer:



$T(n) = n \log_5 n + n$

Use Master Theorem:

$f(n) = O(n^{\log_b a}) = O(n)$, $T(n) = \Theta(n^{\log_b a} \lg n) = O(n \lg n)$.).