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Problem 1-2

a. Solve the recurrence: $T(n) = 2T(n/3) + nlgn$

Solved using the master method: Since $n^{\log_3 2} \approx \sqrt{n}$, it is clear that any ϵ between 0 and .5 will leave $f(n)$ polynomial larger than $n^{\log_3 2}$. Thus, $T(n) = \theta(nlgn)$