Master Method
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1. $T(n) = 2T(n/2) + n$, case 2 : $T(n) = \Theta(n \lg n)$
2. $T(n) = 3T(n/4) + n \lg n$, case 3 : $T(n) = \Theta(n \lg n)$
3. $T(n) = 5T(n/3) + n \lg n$, case 3 : $T(n) = \Theta(n \lg n)$
4. $T(n) = T(2n/3) + 1$, master method cannot be applied because it does not follow the master method format of $T(n) = aT(n/b) + f(n)$
5. $T(n) = 16T(n/4) + n^2$, case 2 : $T(n) = \Theta(n^2 \lg n)$
6. $T(n) = 2T(n/2) + n^2$, case 3 : $T(n) = \Theta(n^2)$
7. $T(n) = 2T(n/2) + \sqrt{n}$, master method cannot be applied, as I cannot state that $n^{1+\epsilon} \leq \sqrt{n}$
8. $T(n) = 2T(n/2) + n \lg n$, case 3 : $T(n) = \Theta(n \lg n)$