

CS 430 - Fourth Quiz

Please work on separate paper, and write only the final solution here. This quiz is closed books and the only notes allowed are on the back of this page. You have 25 minutes. Good luck!

Give asymptotic upper and lower bounds for $T(n)$ in each of the following recurrences. Assume that $T(n)$ is constant for $n \leq 2$. Make your bounds as tight as possible, and justify your answers (if you use the Master theorem explain what are a, b, ϵ , and which case applies. However, your answer should not have a, b).

a) $T(n) = 16T(n/4) + n^2$.

b) $T(n) = 7T(n/2) + n^2$.