

Today: Solving recurrences; §§ 4.{0,3,4,5}.

Next class: Probabilistic analysis; §§ 5.{0,1,2,3}.

Reminders: Homework. Newsgroup. Reading. Coding. Practice. Don't fall behind.

1. List the members of your group below. Underline your name.

2. Demonstrate the *recursion tree* method on the recurrence $T(n) = 4T(n/3) + 5n$.

3. Demonstrate the application of the substitution method with guess $T(n) = cn^{\log_3 4}$ to the recurrence of Question 2. Explain where the proof breaks down.

4. Modify the guess of Question 3 to allow the use of the substitution method to prove that $T(n) = O(n^c)$, for a suitable constant c .

5. Prove the result of Question 4 using the *master method*.