

COMP 304
Assignment 2
Due at 7:00, Tuesday, September 30, 2008
All problems are of equal value.

Reading

Cormen, Leiserson, Rivest and Stein, Chapters 4, 7, 9 (also 2.3, 28.2, 33.4).

Practice

CLRS, 2.3-3, 2.3-5, 2.3-7, 2-4, 4.1-1, 4.1-2, 4.1-5, 4.3-1, 4.3-2, 4.3-3, 4.3-4, 4.2, 4-4, 4-6, 4-7, 7.2-1, 7.2-2, 7.2-3, 7.2-4, 7.4-1, 7.4-2, 7.4-3, 7-3, 7-5, 9.1-1, 9.1-2, 9.3-1, 9.3-2, 9.3-3, 9.3-5, 9.3-6, 9.3-7, 9.3-8, 9.3-9, 9-1, 9.3, 28.2-1, 28.2-2, 28.2-5, 28.2-6, 33.4-3, 33.4-4, 33.4-5, 33-3.

To Be Handed In

1. Create a recurrence for which on exact powers of 5, the solution of the recurrence would be $\Theta(n^4 \log^3 n)$.
2. CLRS, 4-1
3. CLRS, 7-3
4. CLRS, 9-2
5. CLRS, 28.2-3 and 28.2-4

Bonus

An economically-challenged chain-smoking professor finds that he can put together four cigarette butts to make a complete cigarette. If he starts with n cigarette butts, how many complete cigarettes can he smoke?