COMP 312
Assignment 2
Due at 9:00, Thursday, September 20, 2007
All problems are of equal value.

Reading

Brassard & Bratley, Chapter 4 (not section 4.6).

Practice

Brassard & Bratley, 4.1, 4.6, 4.7, 4.8, 4.9, 4.13, 4.14, 4.37, 4.38.

To Be Handed In

1. Brassard & Bratley 4.2.
2. Brassard & Bratley 4.5.
3. Brassard & Bratley 4.36.
4. Brassard & Bratley 4.39.
5. Create a recurrence for which on exact powers of 5, the solution of the recurrence would be $\Theta(n^4 \log^3 n)$.

Bonus: Imagine the following gambling game: You are to make 10 bets on the outcome of a coin flip. If you bet x dollars you will win x additional dollars if you are right and lose the x dollars otherwise. You can bet any amount you want on each bet. You have access to a fairy godmother who will tell you the correct outcome of each coin flip before you bet. The problem is the fairy godmother gets the answer wrong one time for every 9 times she gets it right and you have no idea which of her 10 predictions will be the wrong one. You start with $ 100. What is the maximum amount of money you can be guaranteed of winning?