Homework 1: assigned 10/7, LATEST due date Thursday 10/13

All algorithms/proofs should be in bullet form: step by step.

1. Exercise 3, Page 22 “There are many other settings in which we can ask ….”
2. Exercise 5, on Page 24 “The stable matching problem, as described in the text, assumes ….”
3. Exercise 7 on page 26 “Some of your friends are working for CluNet….”
4. Exercise 2 on page 67 “Suppose you have algorithms with the six running times …”
5. a. Prove (by induction) that sum of the first n integers (1+2+…+n) is n(n+1)/2

   b. What is $1^2+ 2^2 + 3^2 + ... + n^2$ = ?? Prove your answer by induction.
6. How many tries do you need (in the worst case) in the two egg problem when there are 200 steps? what about n steps?