FALL 2008: **COT 5407** Intro. to Algorithms

[Homework 4; Due Oct 30 at start of class]

General submission guidelines and policies: Add the following signed statement. Without this statement, your homework will not be graded.

> I have adhered to the collaboration policy for this class. In other words, everything written down in this submission is my own work. For problems where I received any help, I have cited the source, and/or named the collaborator.

Read the handout on **Homework guidelines and collaboration policy**.

Problems

23. (**Exercise**) Run all the animation demos recommended in class.

24. (**Exercise**) Solve Exercise 12.1-2, Exercise 12.1-3, p256, Exercise 13.1-6, p277, Exercise 13.3-2, p287. Exercise 14.1-1 and 14.1-2, page 307. Handwritten answers are fine for this question.

25. (**Regular**) Solve Exercise 12.2-1, p259.

26. (**Regular**) Solve Exercise 12.2-5, p260. Then using the example of the binary search tree in Figure 12.2 (p257), identify a node x in the tree such that x does not have two children and the statement in Exercise 12.2-5 is not true for x (i.e., either its predecessor has a right child or its successor has a left child).

27. (**Regular**) Solve Exercise 12.3-5.

28. (**Exercise**) Read and understand Section 13.4 on how to delete from a RB-tree.