

FALL 2007: **COT 5407** INTRO. TO ALGORITHMS  
[HOMEWORK 3; DUE OCT 18 AT START OF CLASS]

**General submission guidelines and policies:** ADD THE FOLLOWING STATEMENT AND SIGN IT: **I have adhered to the collaboration policy for this class and what I am presenting is my own work.** Without this statement, your homework will not be graded.

## Problems

13. (**Exercise**) Solve these exercises (These will not be graded): Exercise 8.2-1, p170; Exercise 8.3-1, p173; Exercise 9.3-3, p192;
14. (**Regular**) The binary system has base 2, while the decimal system has base 10. If the base of my system is  $n$ , how many digits do I need to express a number that is at most  $n^k$ ? Now use this information to solve Exercise 8.3-4, p173.
15. (**Extra Credit**) (Exercise 8-5, p180)
16. (**Regular**) Solve Exercise 9.3-1, p192.
17. (**Regular**) Solve Exercise 9.3-7, p193.
18. (**Extra Credit**) Solve Exercise 9-2, p194.
19. (**Exercise**) Solve Exercise 12.1-2, Exercise 12.1-3, p256.
20. (**Exercise**) Solve Exercise 12.2-1, p259.
21. (**Extra Credit**) Solve Exercise 12.2-8, p260.
22. (**Exercise**) Solve Exercise 12.3-3, p264.
23. (**Exercise**) Solve Exercise 13.3-2, p287. Handdrawn trees are acceptable.
24. (**Exercise**) Run all the animation demos recommended in class.