Illinois Institute of Technology
Department of Computer Science

Homework Assignment 1

CS 430 Introduction to Algorithms
Fall Semester, 2014

Rules for Homework

On this and all future homework assignments, observe these guidelines *or credit will be deducted*:

- **Observe the Honesty Pledge!**

- Write your name *clearly* at the top of *each* page. If I can't read your name *easily*, you will not get credit for the assignment.

- Begin each problem on a new page.

- Staple your finished assignment in the upper-left corner. Do not use a paper clip or fold the corner—it is your job to insure that pieces of your assignment don't get lost.

- All work must be your own with no collaboration with anyone else. Remember, you must sign and turn in the honesty pledge with this assignment; violating it will result in failing CS 430.

- Explicitly cite any references you use, including the textbook and any web pages; except for the text, always give full citations—authors, titles, dates of publication, page numbers.

- Algorithms must be carefully presented, proved correct, and analyzed in terms of the their time and space requirements. Follow the style of the texbook in these matters—your analyses and proofs must be mathematically rigorous.

- If you do not turn in your homework in class on the due date, *it is your responsibility to get the paper directly to the TA*.

- You must justify any mathematical statements.

Due: Wednesday, September 3

1. Problem 2.3-3 on page 39

2. Problem 2.3-4 on page 39

3. Problem 2-3(a) on page 41

4. Problem 3-3(a), second row only, on pages 61–62; justify your answers!

5. Problem 4-3(c) on page 108; solve this problem two ways: first with the master theorem on page 94, and then using secondary recurrences (pages 15–16 in the August 27 notes)