

Computer Science 373 – Analysis of Algorithms
Prof. Steven Skiena
Fall 2025

Homework 1 – Asymptotics and Data Structures
Due Tuesday, September 16, 2025

To facilitate grading, limit the solution of each problem to the front side of a single sheet of paper. You may put two or more problems on a single side if they completely fit, but keep the problems in order. Solutions must be submitted via BrightSpace, **as scans of hand-written originals**, with each partner submitting the same full assignment. Please don't wait until the last minute to look at the problems. All numbered problems come from the **third** edition of *The Algorithm Design Manual*, by Skiena.

1. Problem 1-19.
2. Problem 1-21.
3. Problem 1-22.
4. Problem 1-24.
5. Problem 2-8.
6. Problem 2-9.
7. Problem 2-26.
8. Problem 2-28.
9. Problem 2-29.
10. Problem 2-30.
11. Problem 2-31.
12. Problem 3-3.
13. Problem 3-11.
14. Problem 3-25.
15. Problem 3-26.

Interested students can try the programming challenge problems at the end of each chapter – the amount of extra credit is small enough that you should be motivated by interest and not greed.