

Homework 1
CS 126

Submission Date: September 15, 2000 (In class)
No Late Submission Accepted

- (1) Page 15, Problem 1.3-6 (10 points)
- (2) Let $f(n) = n^{0.231}$ and $g(n) = \log n$. Give the correct relationship between $f(n)$ and $g(n)$ using asymptotic notation. Derive your conclusions (10 points)
- (3) Page 37, Problem 2.2-3 (10 points)
- (4) Page 37, Problem 2.2-4 (10 points)
- (5) Page 37, Problem 2.2-7 (20 points)
- (6) Page 39, Problem 2-4 (g) (h) (10 points)
- (7) Page 45, Problem 3.1-3 (10 points)
- (8) Implement versions of Merge-Sort and Quick-Sort. Compare times on inputs of size 20000 integers. What can you conclude ? (20 points)

Note: I will grade this homework out of 80 points. You are free to drop any problem(s) that you wish to