Homework Set #1

1. (10 points) **Comparing Functions**: What is the smallest integer value of $n > 1$ such that an algorithm whose running time is $53n(\log_2 n)^3$ runs ***slower than*** an algorithm whose running time is $185n(\log_2 n)^2$ on the same machine? Justify your answer.

2. (10 points) Exercise 1.2-2 (page 14).

3. (10 points) Exercise 2.1-1 (page 22).

4. (20 points) Exercise 2.1-3 (page 22).

5. (20 points) Exercise 2.2-3 (page 29).

6. (10 points) Exercise 2.3-1 (page 37).

7. (20 points) Exercise 2.3-5 (page 39).