Chapter 1 and 2

1. (3) Show using definition of $\Theta$ that $\frac{1}{2}n^2 - 5n = \Theta(n^2)$

2. (5) For the following pair of functions indicate whether $f(n)$ is $O, \Omega, \Theta$ of $g(n)$:

   - $n^k, c^n$
   - $2^n, 2^{n/2}$
   - $n^2, n \log^2 n$

3. (4) Chapter 1, Problem 1, Problem 2

4. (5) Chapter 2, Problem 1 c, d

5. (5) Chapter 2, Problem 2 c, e


Practice Problems (not for grade)

1. Chapter 1, Problem 4

2. Chapter 2, Problem 3