Homework 1

Please complete the following problems legibly on a separate sheet of paper. You should show all the steps you took and justify your answers. This assignment is due **Monday, April 8th.**

Practice Problems

1. (Example 1.1.18) Let $f(x) = xe^{-x^2}$. Is f an even or odd function?

2. (Example 1.1.19) Let $f(x) = x^4 - x^2, g(x) = \frac{x^2}{x^2-1}$, and $h(x) = 2e^{-x^2} - 1$. Verify that each of these functions are even.

3. (Example 1.1.20) Let $p(t) = t^3 - t, q(t) = \frac{t}{t^2-1}$, and $r(t) = te^{-t^2}$. Verify that each of these functions are odd.

4. (Example 1.1.21) Let $Q(x) = x^2 - x$. Is Q an even function? Is Q an odd function?

5. (Example 1.2.11) Let $f(t) = 3t^{1/3}$ and $g(t) = e^t - 2$. Sketch the graph of $y = f(t)$ and $y = g(t)$. Show all work.

6. Practice Exercises: 1.1.A, 1.2.A

Bookwork

§1.1, Homework A, 1.1.1A,1.1.2A,1.1.3A,1.1.4A
§1.2, Homework A, 1.2.1A (a)-(d), 1.2.2A (a)-(d), 1.2.4A (a)-(d),
1.2.6A,1.2.7A,1.2.8A,1.2.9A