Math 217, Spring 2013
Assignment 1

Problem 1. §1.1, Problem 1.

Problem 2. §1.1, Problem 2.

Problem 3. §1.1, Problem 5.

Problem 4. Verify that the give function is a solution for the give ODE.

(a)

$$y = e^{3x}\cos 2x \quad \text{for the ODE} \quad y'' - 6y' + 13y = 0;$$

(b)

$$y = c_1 e^{2x} + c_2 x e^{2x} \quad \text{for the ODE} \quad \frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 4y = 0;$$

(c)

$$y = e^{-x^2}\int_0^x e^{t^2}dt + c_1 e^{-x^2} \quad \text{for the ODE} \quad \frac{dy}{dx} + 2xy = 1;$$

Problem 5. §2.2, Problem 6.

Problem 6. §2.2, Problem 8.

Problem 7. §2.2, Problem 9.

Problem 8. §2.2, Problem 12.

Problem 9. §2.2, Problem 23.

Problem 10. §2.2, Problem 28.