Math 319 - Differential Equations II
Assignment # 2
due Fri Sep 26th, NOON, SCI 386

Instructions: You are being evaluated on the presentation, as well as the correctness, of your answers. Try to answer questions in a clear, direct, and efficient way. Sloppy or incorrect use of technical terms will lower your mark.

The assignment may be done with up to 4 other classmates (i.e. total group size: no more than 5). If you collaborate with classmates, the group should hand in one document with all contributing names at the top.

1. Section 10.2 #12

2. Section 10.2 #14

3. Section 10.2 #18

4. Section 10.2 #22

5. Section 10.2 #28

6. Solve the initial value problem

$$F''(x) + 4F'(x) + F(x) = 0 \qquad \text{with} \qquad F(0) = 0 \quad \text{and} \quad F'(0) = 2\sqrt{3}. \tag{1}$$

   Express the general solution and final solution in terms of cosh and sinh (the hyperbolic trig functions).

7. Section 10.3 #2

8. Section 10.3 #6

9. Section 10.3 #12

10. Section 10.3 #20