Gabriel Emerson

Lab 3: Matlab Symbolic Math Toolbox Answer Sheet

4.1. Find the two solutions of the second order equation.

- $x = 2$
- $x = 3$

4.2. Solve the system of equations.

- $x = 7/2$
- $y = 1$
- $z = 5/2$

4.3. Find the **centers** of the circles.

- $C_1 = $ (-3/5, -23/10)
- $C_2 = $ (33/5, 73/10)

4.4. Solve the equation using **both** methods in example 2.3. Turn in code for both approaches but put the answer here once.

- $x = $ -1.91224
- $x = $ 1.91224

4.5. How many solutions does the equation have? What are the first three solutions?

- The equations have infinite solutions since the two waves will continuously cross over each other
- $x_1 = 0.785219$
- $x_2 = 3.9261$
- $x_3 = 7.09007$

4.6. Write an equation of the form $f(x) = g(x)$, plot both functions on the same figure, and solve them using **both** methods described in example 2.3. Include code for both approaches. (Either insert the figure into this word document or submit it as a separate file on Canvas.)

- Use equation cos(x) = 2x^2
- $x_1 = $ -0.63455
- $x_2 = 0.63455$

4.7. What did you enjoy about this lab?

- This lab was rather straight forward and gave good examples of how to solve the questions later asked, without giving away how to do the entire problem.

4.8. What didn't go well in this lab?

- Trying to remember how exactly to fit the points into the equation of a circle, however, after thinking for a moment I remembered what to do and it was no big deal.

4.9. How would you improve the lab experiment for future classes?

- I have no way to improve this lab. It was helpful to show how to get things done, and difficult enough to make you think about what you are doing.

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