

Project #3

Instructions: Each project will consist of one or more problems or tasks. You can work on the details of problems with others. In fact, I encourage you to do so. Get a group of two or three people together, find a blackboard, and go to it.

For each project, you will submit a carefully written report on your results. All of your writing should be done independently even if you have worked on details with others. Your report should be self-contained so that a reader can understand the context and results without having read the problem statement.

For your writing, you should consider the audience to be familiar with the material we have seen so far in this differential equations course but who have not looked at the particular problems at hand. You should include enough detail so that a reader in this audience could follow your reasoning and reconstruct your work. In your writing, focus on being precise, concise, and clear.

You should write using the style and tips given on the handout “Notes on writing in mathematics”. When appropriate, you should include carefully drawn or printed figures and plots. Since typesetting mathematics is difficult, you can write project reports neatly by hand. Another option is to use a word processor and then write mathematical expressions in by hand. You can also use an “equation editor” if one is available in your word processor but this can be time consuming so you need not do so.

The project is due in class on Friday, April 1.

For this project, follow the instruction in Lab 2.5 of the text.

For your report, you can consider yourself to be in the research and development department of a company. You have been given the task of analyzing the three options described in instructions for Lab 2.5 with the goal of making a recommendation as described in Part 4 of the instructions. Consider your audience to be managers who have technical background but who have not considered this problem and may be rusty on some mathematics.