

I. Project Expectations

Form a group of 3-4 students and together select one of the approved topics for your project. The project will be due on the day of the final (TBD). Only one project should be submitted per group; all group members whose names do not appear on the title page of the project will not receive any credit for their work. Any student who chooses to not join a group and instead to complete a project individually will not receive any of the “individual work” points for the project (see section II).

Each group project will consist of three parts – a worksheet, a summary paper, and several group member evaluation forms. After selecting one of the three topics, a group will need to complete the corresponding worksheet and summarize their results in typewritten paper. Finally, every member of the group needs to complete an evaluation form, which needs to be submitted via email to my email address (krtolica@math.utah.edu).

A. Worksheet

Students' answers to a worksheet may be handwritten. However, points may be deducted for messiness. Therefore, it is suggested that students do not complete the worksheet in pen. All questions on the worksheet should be fully answered and, for computations, sufficient supporting work needs to be shown. Additionally, equations and calculations should be accompanied by explanations given in complete sentences of what these calculations mean.

B. Summary Paper

Students need to be able to effectively communicate math ideas and concepts to their peers. After completing one of the worksheets, you will need to describe how you approached your topic/problems, what computations you made and equations you used, why you did what you did, what the results were, and what the implications of these results are. Summary papers must be typewritten on 8 1/2 x 11 paper - but math formulas, equations, diagrams can be written in by hand only if done neatly. In your paper, you should pay particular attention to the following guidelines:

- The project is a report on an investigation or question. This means your report should begin with an introductory paragraph in which you discuss the question or problem that you are examining and introduce briefly how you approached your work, perhaps give a brief statement of something that you discovered or a conclusion you will examine in more detail later in the report. The next part of your report will be the main body in which you discuss your work, give your analysis, and demonstrate your results. The last part of your report should be a nice summary of your findings and conclusions backed up by the evidence you presented in the middle part of your report.
- As with any report or project for a university course, you should edit your report at least once before submitting it for grading. Things to look for in the editing process include typographical errors, grammar and spelling errors, and awkward writing. All members of the group should read the final draft of the project, approve it before it is submitted, and

sign their name on the title page. If there is group member who has made no contribution to the project, the instructor should be informed and that student's name not included in the report.

- If tables or graphs are included in the worksheet, then the main body of the report should include correct references to page numbers and figures.
- Sources used for information or data should be described and adequate references for these sources given. Material taken from references must be summarized in one's own words. Students should be aware of issues of plagiarism in "copying and pasting" information.

YOU MUST ANSWER ALL QUESTIONS ASKED AND INCLUDE EVERYTHING IN YOUR PROJECT.

C. Group Member Evaluation Form

Every group member needs to complete a group member evaluation form along with their project. This form will ask you to evaluate the contributions of every member in your group, including yourself, and rate the effort that they put into the project. It should remain private, which is why you need to submit it to my email address. However, if a group's evaluation forms are not all submitted by the project due date, points may be deducted.

II. Grading

The analysis of the problem, organization of work, grammar, and spelling will all be considered in the project grade. Specifically, in evaluating the projects we will consider the following:

Mechanics: (33 points) Spelling/grammar; summary neatly typed on 8 1/2 x 11 paper; title page with project title and names of group members; references cited correctly. Worksheet neat and easily legible.

Mathematics & Analysis: (100 points) Correct use of mathematical concepts; math concepts accurately described and explained; calculations correct; appropriate use of models/reasoning; logical reasoning in presenting arguments or making conclusions.

Group Work/ Presentation: (34 points) Thoughtful approach to the topic; depth of research; organization of ideas; clarity of discussion; unusual aspects of project; appropriate group effort.

Individual Work: (33 points) You will be asked to evaluate the contribution of the members of your group. These evaluations will be taken into consideration for each member's individual grade.