Lab I: Grading Rubric

1 Lab Write-Up Guidelines

The primary goal of this class is to teach you how science is actually done. This means, in part, keeping a record of everything. Please write down everything you do in the order you do it. State assumptions, show work for calculations, and so on. You will do most labs with a partner, but make sure to keep your own records. I should be able to reproduce your answers with just the information in your notebook. Below are some formatting and specific content requests:

- Begin each lab write-up on a new page (or document) and have your name, your partner's name, the lab title, and the date at the top.
- Always include units where applicable, and always label plot axes.
- Put a box (or highlight) around numerical answers (and make sure to show your work!).

2 Grading Rubric

Each lab write-up will be assigned a grade out of 10. The points will be assigned based on three factors:

1. **Clarity of writing:** How you explain and justify your answers.
    - 1 point: Little to no justification of answers; hard-to-follow explanations or logic.
    - 2-3 points: Explanations are reasonable, but additional clarification may be in order; scientific terms are used appropriately most of the time; pre- and post-lab reflections are completed for every lab.
    - 4 points: Explanations are clear and every answer is fully justified; scientific terms are used correctly; and pre- and post-lab reflections are thoughtful and raise additional questions about the subject matter.
2. **Use of graphs, diagrams, and equations:** A picture (or a mathematical equation) can be worth 1000 words!
    - 1 point: Graphs, diagrams, and equations are rarely used where appropriate, not well explained, or lack axis labels or legends.

- 2 points: An earnest attempt is made to use graphs, diagrams, and equations appropriately, but they are not always used in the correct context or fully explained.
- 3 points: Graphs, diagrams, and equations are used appropriately, are properly labeled, well explained, and relate directly to the rest of the lab assignment.

3. **Correctness of answers:** You don't always have to be right!

   - 1 point: The answers are very obviously incorrect and off by many orders of magnitude.
   - 2 points: The answers are incorrect, but could be reasonable given the question. Alternatively, the answers are obviously incorrect, but are identified as such and a reasonable hypothesis is presented as to why they are so inaccurate.
   - 3 points: The answers are correct to within an order of magnitude (or to the degree of accuracy specified by the question).