

PHYS 391, Homework #1
Due Tuesday, Oct. 6, start of class.

Key Concepts

- Measurement Uncertainties
- Significant Figures
- Rules for Error Propagation

Reading: Taylor Chapters 1-3

Homework Problems (taken from Taylor):

1. Problem 2.4
2. Problem 2.6
3. Problem 2.18 - Note we will learn how to do this “more correctly” later in the term, but this kind of quick estimate of a slope and uncertainty is still quite useful.
4. Problem 2.27
5. Problem 3.16
6. Problem 3.24 - If you are uncertain about this, do problem 3.23 also and check your answer against the back of the book. They are very similar problems.
7. Problem 3.31
8. Problem 3.46
9. Find the current being delivered by the battery in the circuit below. You can assume the uncertainty on the voltage is negligible. Your answer should include an uncertainty, assuming the uncertainties on the resistances are random and uncorrelated.

