Recitation Exercise
May 4

In this exercise, I invite you to start the process for studying for the final by *finding the common threads* in what we've been doing all semester.

In each segment, you should:

1. Look at a series of exercises you've done previously, and remember how to do them (discuss this with your group). Don't *actually* do them, but write down briefly how you'd go about doing that.

2. Identify the common features. Each of the problems will have a lot of things in common: what are they, and how do you recognize that you should use these techniques?

3. Identify things that make each problem unique. What's different about them?

You should get out a laptop and go to the Final Study Guide link on the course webpage (`https://walterfreeman.github.io/phy211/finalstudy.html`); the series of exercises are drawn from there. That webpage also contains direct links to all of the homework assignments, recitation exercises, and exam problems that these questions are drawn from.

I hope that this will be a useful way for you to study – recognizing the big picture ideas that tie together what we've done.

Unit 1: Kinematics in Two Dimensions

1. Consider three problems: Homework 2 #3, Recitation Week 3 Wednesday #3, and Exam 1 Question #3. The study guide on the website has links to all of these. Discuss with your group how you should approach each problem.

   (a) Briefly, how would you solve HW2 #3?

   (b) Briefly, how would you solve Recitation Week 3 Wednesday #3, parts 1-4?

   (c) Briefly, how would you solve Exam 1 #3?

2. What things did your approach to all of these have in common? What are the big ideas involved here?

3. What features are unique in each of the three problems?

4. How did you handle the fact that in HW2 #3, you need to find the speed and direction of Teddy's velocity on landing?

5. How did you handle the fact that in Recitation Week 3 Wednesday #3 you needed to solve for a height?

6. How did you handle the fact that in Exam 1 #3 you needed to find two answers, rather than just one?