

This Week in SP211:5522

Homework must be submitted stapled in assignment groupings.

Always attempt to complete the readings before class. You are responsible for reading 10 pages past the current lecture. You may not understand the material completely, but you should read it prior to lecture.

Problems to submit on the date listed:

**** **STUDY the chapter summary each day before attempting the problems** ****

Week of 23 Aug

Mon: Read Giancoli chapter 1

Tues: Complete Measurements prelab prior to the lab period
read and print lab instructions prior to lab
non-HTML version

Wed: 1: P 2,13

Fri: 1: P 36*,41,54, 55 plus # 55 extension (E1.55)

Week of 23 Aug

Mon: 2: Q1,Q8, 5,14,27,44 (no letter: assume P)

2: Q1,Q8, 5,14,27,44

Q: question **P:** text problem - *Assume problem in text if there is not letter.*

A: statement on this assignment sheet

(E1.55) Extension to problem 1.55 (*located on this page*)

Wed: 1: P 2,13 => Submit chapter 1 problems 2 and 13 on Wednesday.

Use full vector notation - hats and arrows !

Hints

Auxiliary Problems

A1

E1.55. $(\sin \theta) = \sin(\theta + \Delta\theta) - \sin(\theta) \approx \frac{d(\sin \theta)}{d\theta} \Delta\theta$.

What is $\frac{d(\sin \theta)}{d\theta}$? Use this to estimate the uncertainty $\Delta(\sin \theta)$

for $\Delta\theta = 0.5^\circ * (\frac{1}{180^\circ})$ and $\theta = 15^\circ$ and 75° . Compare the results with direct calculations of $\sin(15.5^\circ) - \sin(15^\circ)$ and $\sin(75.5^\circ) - \sin(75^\circ)$.

Note: The derivatives that you learned for sine and cosine assume that the angle is expressed in radians. We will be wary of degrees and embrace radians.