

Reading:

HRW Chapters 1 and 2

Problems:*Due 11 AM Friday, September 6.*

- (1) What is $\int t^3 dt$ equal to ?
- (2) A US visitor to the UK purchases a car, which has a fuel consumption (there) of 40 mpg, and ships it back to the United States. However, the visitor doesn't realize that the US gallon is 3.7854 liters while the UK gallon is 4.5460 liters. For a trip from New York City to Buffalo, approximately 710 miles, (a) how many gallons of fuel does the person expect the imported car to consume? (b) How many gallons does the car actually consume? (c) Comment on the use of significant figures in this problem?
- (3) HRW Chapter 1 Problem 58
- (4) HRW Chapter 2 **Question 6** (page 31)
- (5) HRW Chapter 2 Problem 11
- (6) HRW Chapter 2 Problem 17
- (7) HRW Chapter 2 Problem 24
- (8) HRW Chapter 2 Problem 45
- (9) HRW Chapter 2 Problem 51
- (10) The reading in chapter discusses significant figures a little. We will/did discuss them in class on Monday September 2. To review the basics of sig figs try here (in the pdf version these are html links)
 - UGuelph Sig Fig review
 - To check your understanding run through 10 questions at <http://science.widener.edu/svb/tutorial/sigfigurescsn7.html>.
 - Please record the number of correct answers and any questions you have on the exercises.
- (11) Why should we care about significant figures in quantitative work? You can use an example calculation to illustrate your reason. In this course we'll strive to be very careful with sig figs, even more careful than our text HRW. This week one of the answers in the back of the book has the wrong number of sig figs...