

**Due Tuesday, February 10, in recitation class**

Problems from “Data Reduction and Error Analysis for the Physical Sciences” by Bevington and Robinson, 3<sup>rd</sup> Edition.

Some of these problems may be easiest to solve using a spreadsheet, but to complete the assignment make a hand-written summary of your calculations showing all relevant numbers and tables.

Chapter/ Problem	Topic	Special Instructions and Hints
4.1	Mean and standard deviation	Compute $\sigma$ three ways: via the sample variance, via the variance using the ‘exact’ mean, and via the second moment of the dice distribution given in Exercise 2.4.
4.3	Computing the Poisson distribution and $\chi^2$ .	Equation 2.16 will be needed.
4.4	Weighted mean uncertainty	Do the algebra...
4.5	Estimating a probability	This one is slightly more subtle than it first looks.
4.8	Weighted mean	Simple number-crunching.
4.11	Binomial polling	For Part (a) assume $n_1=n_2=500$ . You’ll need results from pages 33 and 63 for Parts (b) and (c).