PHYS 114 HWK 3 **Due: 2/22/10**

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1. From text, using MatLAB "as much as possible": Chap 1: 1.5, 1.7, 1.9; Chap 2: 2.3, 2.10.

2. For three "unfair" coins (p = ¼), that the sum of all probabilities for tossing all possible combinations of heads and tails is 1. [Hint: The case of 2 heads and 1 tails was done for you in the lecture, where we found $P_B(x; n, p) = P_B(2; 3, ½) = 29/64$. Write down explicitly all of the other probabilities, x = 0, 1 and 3, and add them to show they equal 1.]

3. Using your data from HWK 2:
   a) Make a histogram of your 500 die rolls
   b) On that histogram, overplot a best estimate Binomial PDF
   c) Repeat with a Poisson PDF
   d) Repeat with a Gaussian PDF.

   Label all the curves! Put in the form of an MS Word table with figure caption, as usual.

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