Physics 301-001

Homework #1: Probability and Statistics I

Due Thursday, January 30, at 4**:00 pm**

Reading Assignment:
During this week, you should be reading the following (in order):

1) Boas, ch.15 section 1-5

Homework Assignment:
homework will ***not*** be accepted. Please write your answers to these questions on a separate sheet of paper with **your name and this class's section number, 001.** You are encouraged to work with your classmates on these assignments, but please **write the names of all your study group members** on your homework.

Practice Problems:
We have listed problems from the textbook that involve related skills and concepts; answers to these problems may be found in the back of the text. You should use these extra problems for practice and review, but they do *not* need to be turned in.
Selected Practice Problems from Boas: 1.1, 1.9, 2.1, 2.9, 2.15, 3.1, 3.5, 3.11, 3.21, 4.1, 4.5, 4.9, 4.15, 4.23, 5.7, 5.11

1. Letting me know (20 pts): Please answer the following questions about this course:

a) What are a few things that you hope to get out of this course?
b) Because of the nature of this course, it will get challenging at times. What are a few things that I can do to best facilitate your success in the class?
c) Do you have any programming experience? If so, in what languages?

2. In book problems (84 pts)

1.2 (4 pts)	1.8 (4 pts)	2.2 (4 pts)	2.8 (4 pts)	2.14 (12 pts)
3.2 (4 pts)	3.6 (4 pts)	3.8 (4 pts)	3.12 (20 pts)	3.20 (8 pts)
4.6 (4 pts)	4.10 (8 pts)	4.22 (4 pts)		

3. Flipping out (40 pts): Find a coin. For this problem tails will be zero and heads will be one. Flip the coin 6 times. Each time the coin lands record its value. (For example, if you flip tails, tails, heads, tails, heads, and heads: you get 0 + 0 + 1 + 0 + 1 + 1 = 3). Do this experiment 10 times (That's 10 X 6) and make a histogram of your findings. (You are encouraged to do this in a group and thus can share results with your group member. Make sure to include this person's name!)

4. Flipping out (40 pts): Redo problem with numerically with 10,000 flips.