Homework #2
Due 8am Saturday Sept 22, 2012
Econ B2000, MA Econometrics
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For this exercise your study group may hand in a single assignment. When submitting assignments, **please include your name and the assignment number as part of the filename**. Please write the names of your study group members at the beginning of your homework. These assignments will be made public and available to all members of the class.

1. Experiment with the file, samples_for_polls.xls, to create at least 100 polls, each with 30 people in it. Show a histogram of the percent, in each poll, who support the candidate. What is the mean of all of the poll averages? What is the standard deviation of the averages? Does this seem reasonable? What if support for the candidate were just 10% -- what is now the histogram of 100 polls? What is its mean and standard deviation? [You can use a nicer program than Excel if you want. Just please make sure to include your work in the homework submission.]

2. Experiment with the file, example_of_normal_distn_of_means.xls, to create a variable with a new distribution (as explained in the Excel sheet). Does its mean seem to have a normal distribution? Can you find a any that don't have a normal distribution?

3. Please complete Exercise 2.6 in the textbook.

4. Please complete Exercise 2.22 in the textbook.

5. Calculate the probability in the following areas under the Standard Normal pdf with mean of zero and standard deviation of one. You might usefully draw pictures as well as making the calculations. For the calculations you can use either a computer or a table.
    a. For a Standard Normal Distribution, what is area to the right of 1.6?
    b. For a Standard Normal Distribution, what is area to the right of 2.3?
    c. For a Standard Normal Distribution, what is area to the left of 0.9?
    d. For a Standard Normal Distribution, what is area to the left of -1.1?
    e. For a Standard Normal Distribution, what is area in both tails farther from the mean than -1.9?
    f. For a Standard Normal Distribution, what is area in both tails farther from the mean than 2.1?
    g. For a Standard Normal Distribution, what values leave probability 0.041 in both tails?
    h. For a Standard Normal Distribution, what values leave probability 0.223 in both tails?
    i. For a Standard Normal Distribution, what values leave probability 0.469 in both tails?