

Econometrics 6818

Assignment 1

(revised Jan 03)

The first assignment will be due on Friday.

It will be done in *Mathematica* and in groups. A group will hand in one assignment.

Turn in a *Mathematica* notebook. Explain, in the notebook what you are doing (that is, add explanatory text)

Form into four groups. Assign each group a different integer between 1 and 4 inclusive. This number will be the name of your group (e.g. group 3)

The assignment for group x is

1. Draw a random sample of y_x observations from a uniform distribution on the zero one interval. Print out the sample.
2. Plot the data using both "ListPlot" and "BarChart" (for BarChart you will have to sort your sample points into groups). In both graphs plot the realizations of y on the horizontal axis and their frequencies on the vertical axis.
3. Now express your BarChart in terms of probabilities
4. Find the mean and standard deviation of your sample
5. Now repeat steps 1 through 5 assuming a standard normal distribution.

For the different groups $y_1 = 5, y_2 = 25, y_3 = 100, y_4 = 500$.

Discuss how the probabilities you estimated relate to our discussion of Classical, Frequency and Axiomatic probability.

Someone from the group should be prepared to present their findings in class on Friday

Turn in both a hardcopy of your assignment and a copy of your assignment on a disk.
Name the notebook 6818as1g x where x is your group number.