KFUPM - COMPUTER ENGINEERING DEPARTMENT

COE-543 – Mobile Computing and Wireless Networks
Project – Deliverable 1: Due March 20th, 2010.

Student Name:
Student Number:

On the subject of Normal RV generation and PDF/CDF plots.

1) Generate three random variables: X1~N(0, 1), X2~N(2, 3), and X3 = X1 + X2 using the method explained in class.

a) Plot the corresponding PDFs for X1, X2, and X3 on the same figure. Also include the analytical curves (plotted using Markers) on the same figure. Provide the proper labeling on the x and y axes.

b) Plot the corresponding CDFs for X1, X2, and X3 on the same figure. Also include the analytical curves (plotted using Markers) on the same figure. Provide the proper labeling on the x and y axes. For these CDF plots, use the logarithmic scale for the y-axis (i.e. use semilogy() as opposed to plot()).

c) Same as part b – but the plots are to be done on a normal probability paper (scale) as explained in class.

d) Let Y1 and Y2 be the lognormal RVs corresponding to X1 and X2. Plot the PDFs for Y1 and Y2. Again include the analytical curves (plotted using Markers) on the same figure.

e) Plot the corresponding CDFs for Y1 and Y2 using the logarithmic y and x axes.