

Getting Acquainted with APPL

ECE/CS 541

Due Sept. 7, 2016

This exercise is designed to get you working with the APPL package when installed in Maple.

1. Start Maple, open a new worksheet, and read in the APPL library.
2. Create an exponential random variable X_1 with rate 1
 - get Maple to print the variable's mean and its variance
 - get Maple to plot (using `PlotDist`) the variable's probability density function, its cumulative distribution function, and its hazard rate function
3. Create another exponential random variable X_2 with rate 2, and then a random variable X_{\min} which is the minimum of X_1 and X_2
 - Convert the form of $\min(X_1, X_2)$ into the hazard rate function, and get Maple to plot it.
4. Create a continuous random variable whose hazard rate function is $h(t) = \sin(t) + 1.1$.
 - get Maple to plot its probability density function
 - get Maple to print its mean and variance

Using the `Print` function of Maple you can output the worksheet you've been developing. Turn a hardcopy of that in for this exercise.