8.1 Distributions of Random Variables

To graph a histogram:

STAT and choose 1: Edit
Enter the values of X in L1 and the probabilities in L2.
2^{nd} STAT PLOT and choose 1:Plot1
Press Enter to select On.
For Type, choose the last icon on the first row, Xlist: L1 and Freq: L2.
Set your window. For example:
Xmin = –0.5 (include the entire first rectangle of width 1, centered at 0)
Xmax = 5
Xscl = 1
Ymin = 0
Ymax = 1 (heights are probabilities so 1 is plenty)
Yscl = 0.1
Press Graph.
(Hint: You may turn the StatPlot on and off at the top of the Y = screen once you have it set up.)

8.2 Expected Value
8.3 Variance and Standard Deviation

To calculate the mean, median, and standard deviation for a single list of data:

STAT and choose 1: Edit
Enter the data in a list.
STAT then right arrow to CALC and choose 1: 1-Var Stats
2^{nd} and choose the appropriate list (above 1, 2, 3, ...).
On your homescreen: 1-Var Stats L1
Press Enter.

To calculate the mean, median, and standard deviation when given the probabilities or frequencies:

STAT and choose 1: Edit
Put the data in L1 and either the probabilities or the frequencies in L2
STAT then right arrow to CALC and choose 1: 1-Var Stats
2^{nd} and choose the appropriate lists (above 1, 2, 3, ...).
On your homescreen: 1-Var Stats L1, L2
Press Enter.

To calculate the variance:

Follow the appropriate steps above to calculate the 1-Var Stats.
VARS and choose 5: Statistics… and then 4: σx which represents standard deviation.
Press x^2
On your homescreen: σx^2
Press Enter.