Making "Cents" of the Center
Student Worksheet Name_____

Hour_____

1) Write the years of your pennies on the paper pennies provided. You may not use all of them.

2) Order your paper pennies from earliest year to the most recent.

3) Calculate the measures of central tendencies. Show all your work where needed.

a) Mean= _____

b) Median= _____

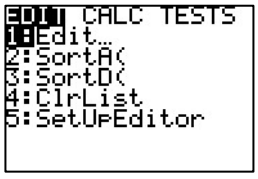
Is your median an actual value in your data? _____

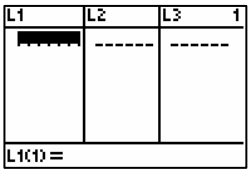
If not, how would you describe the median? _____

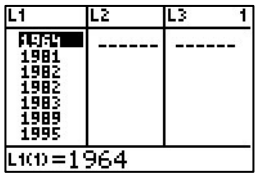
c) Mode(s)= _____

4) Enter the years of your pennies into L1 in your graphing calculator.

a) Press [STAT]. b) Press [ENTER] c) Enter your data into L1.

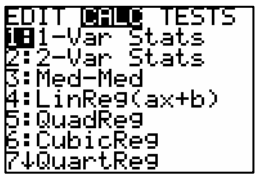


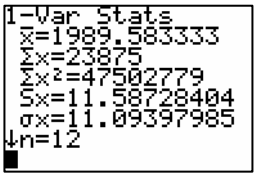




5) Check to see if your calculation for the mean above is correct using the graphing calculator.

a) Press [STAT]. Arrow over to CALC b) Press [ENTER]. Press [ENTER].





$\bar{x}$ = mean

6) Using your data, find Quartile 1 and Quartile 3.

Quartile 1 = _____ Is Q1 a piece of your data? _____

Quartile 3 = _____ Is Q3 an actual piece of your data? _____

7) The following 5 values used to make the box and whiskers of your plot. Use your data to identify these.

Min Value _____ Q1 _____ Med._____ Q3 _____ Max Value _____

8) Complete the following steps to make your box and whisker plot.

a) Make a number line with equal intervals that covers the range of your data.

b) **ABOVE** your number line, plot the 5 points from #7.

c) Put a box around Q1 and Q3. The sides of the box will go through the points at Q1 and Q3.

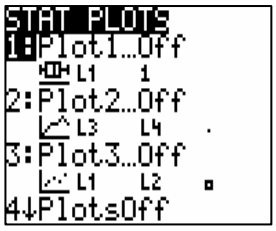
d) Draw a line from top to bottom of the box at your median.

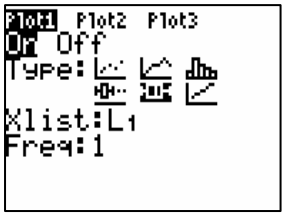
e) Draw a line to connect the minimum value to Q1 (this is a whisker).

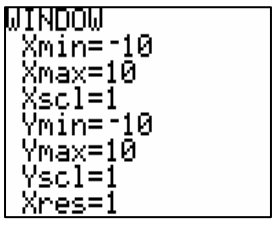
f) Draw a line connect the maximum to Q3 (this is the 2nd whisker).

9) Now, using the data we entered into the calculator, we are going to make a box and whisker plot on the calculator. Follow these steps.

a) Press Y= b) ENTER c) WINDOW d) GRAPH





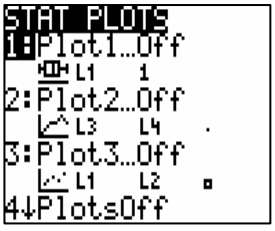


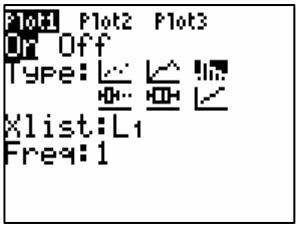
You will need to adjust the values so that your data will appear on the screen.

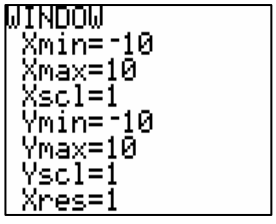
Making a histogram of the data

1) Log on to Navnet.
2) Using the data sent to you by the teacher, experiment with changing the intervals of the histogram.

a) Press Y= b) ENTER c) WINDOW d) GRAPH





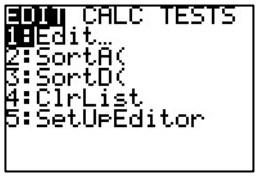


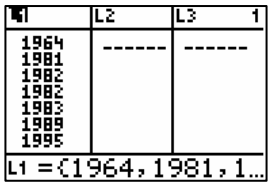
You will need to adjust the values so that your data will appear on the screen.

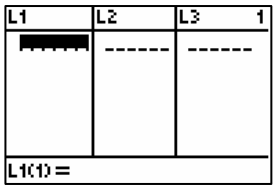
3) Using your data, make a histogram with your pennies.

4) Enter your data into L1 in the graphing calculators. Be sure to clear the data from L1 before entering your data.

a) Press [STAT] [ENTER] b) Arrow up to L1. c) [CLEAR] [ENTER] d) Enter your data.







You will need to adjust the values so that your data will appear on the screen.

5) We are going to make our histograms on the calculator next. Since you experimented with a histogram earlier, just press [GRAPH]. How does your graph look? Do you need to change the window to better reflect your data? If so, press [WINDOW] and make your changes.