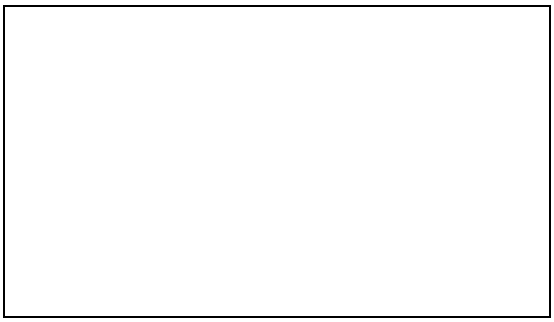
Probability and Statistics Activity with Class Data

Let's look at how the calculator can help us find cumulative data for a cumulative frequency graph. Put the **# of pets** data into L1. Create a histogram using an x-scale of 1 and sketch it below. *Remember to title the graph and label the axes.*



Looking at the graph decide if it is skewed (left or right) or symmetric.

Find the following measures.

Mean =	**median =**	**mode =**
Range =	**midrange =**	**total sum (Σ) =**

We are going to create a cumulative frequency graph so we can plot the growth of the number from person to person. In your calculator you will press **2nd stat** go over to **ops** and down to **cumsum** or press the number 6. Put in the list that you want it to use then press **sto >** and **L2**. This will prompt the calculator to add the amounts as it goes. Now let's look at this list.

We will graph this information as a line graph (on regular graph paper) where each number in our cumulative list is our y-value and our x-values just go up one line at a time until the whole graph is complete. *Remember to title your graph and label your axes.*

One other type of graph that we want to make with this data is a cumulative relative frequency graph (ogive). This graph plots the percentages of the pets owned by each person adding up to 100% at the end. To do this we must first turn our data into percentages. Go into the lists and highlight L3 defining it as L1/sum then press enter. This will turn all the values into a percentage. Designate L4 as the cumsum of L3 and then graph that information. *Remember to title your graph and label your axes.*

What do you notice about the shape of these two graphs?

Which graph is easier to make/ read?

Looking at all of the graphs and data, describe this information using your SOCS.

Practice:
Perform all the same steps for the data about siblings that you just did with the number of pets.