Pocket Change Histogram?

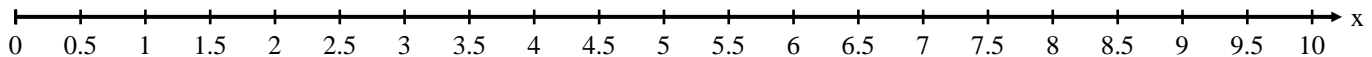Name_____

Date _____

What's the average amount of money a teenager carries around? Let's find out. Since graphing everyone's data would take forever, let's think of appropriate intervals such as 0 - $0.50, $0.51 - $1.00, $1.00- $1.50, etc.   Your teacher will sketch a number line like the one below on the board.

1.   Write the amount of $ you have with you on a post it. Place the post-it on the board in the appropriate interval.   When all class members have posted their $, use little x's to show each on the line plot below.

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 ├──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──► x
 0   0.5   1   1.5   2   2.5   3   3.5   4   4.5   5   5.5   6   6.5   7   7.5   8   8.5   9   9.5   10
```

2. Use the TI– 73 to set up histogram showing the distribution of the pocket change. Before pushing the GRAPH key, set the values in the window so x-min is 0, x-max is the most $, x-scl is the interval (0.5), y-min is 0, y-max is the maximum number of people and y-scale is 1. Sketch the graph on the axes below. Label the intervals and the numbers for the axes.

3. Describe how a histogram is similar and different from a bar graph?

4. Why would a histogram be better for this data than a bar or a circle graph?

5. Looking at the graph, what would you estimate is the average amount of money a teenager might carry? Explain how you know this from looking at the graph.

6. About what is the median amount of pocket change for our class? How did the graph help you decide this?

7. Was there an outlier? How did the outlier affect the histogram?

8. What inferences can be made from the data about the pocket change teenagers might have?

9. A histogram is good for showing large data sets that can be organized into intervals. The question our histogram represented was, "How much pocket change do class members carry with them? What is another question you might ask a large group of people that could be represented using a histogram?