Mathematics 1040   Names _____
Unit I Activity 4 (Entire Class & Groups)   _____
MEASURES OF **CENTER**   _____
                                                        _____

1.   Each of you---Get as many blocks out of the box as you have
     siblings. Do not get a block for yourself but go ahead and count
     half-brothers and sisters and step-brothers and sisters if you want to,
     or not. Connect the blocks into a tower.

2.   Now let's head out into the hall where we have some room. The
     person(s) with the shortest tower (or possibly no tower) should be at one
     end and the person(s) with the tallest tower should be at the other. If
     more than one of you has the same tower length (ex: 3 of you have a
     tower 5 high, etc.), line up in front of each other. **Yes, you are creating a
     human histogram**.

3.   Choose the tallest person to be the class scribe. (Yes, he/she will have to
     get out of line for a moment to get paper and writing instrument.)
     Choose the shortest person to be the class reader for instructions
     through number 9.

4.   Find the **median** number of siblings in the class. Your scribe will write
     on the paper: Median: _____ (and fill in the blank).

5.   Find the **mode(s)** number of siblings in the class. Have the scribe record
     the information. Mode: _____

6.   Find the **range** of siblings in the class: _____

7.   Find the **midrange** of siblings in the class. (Remember **midrange** is the
     largest value plus the smallest value and all divided by 2.) Midrange:
     _____

8.   Find the **mean,** $\bar{x}$, number of siblings in the class. (Think hard—you get
     to do this with no adding and no calculators.) Mean: _____

9. Return to your groups and answer the following questions after the scribe
   has recorded the info for everyone on the board.

        Record: median _____ mode _____ range _____

               midrange _____ mean _____

        a. These are all considered "averages" of different kinds. Which
           "average" was easiest to find? Why?

b. Which was the hardest? Why?

c. What about the other(s)?

9. A long time ago (1985) workers at the Geneva Steel Plant in Orem, Utah complained that they were not being paid enough for the hazardous work they were performing. The local newspaper did an exposé and after talking to the big boss at the plant reported the following: "Steel workers around the country make an average of $18,000. Steel workers at Geneva make an average of $21,600. So they have nothing to complain about." Workers continued to disagree and decided somebody was lying. Here are the numbers. Can you figure out what happened? How should the story really have been reported or was it ok as it was?

   Salaries at the plant:
   5 floor workers: $16,000; $16,000; $16,000; $16,000; $16,000
   1 big boss: $49,600

Find the mean, median and mode. Explain why the boss is happy with the article and why the workers are not.   Explain what the workers would have liked to see in the article. Were the workers correct in saying the reporter or the boss had lied?