**Day 13 Homework – More Work with Measures of Center**

1. Statisticians say that the median is “resistant to changes in outliers” while the mean is not. Explain what this means.
2. Find the mean, median and range of the following data set. Round to one decimal place if needed.

56, 87, 34, 21, 47, 15

mean: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ median: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ range: \_\_\_\_\_\_\_\_\_\_\_\_\_

1. A data set contains 5 data points, has a range of 20 and a mean of 30.
   1. If you were modeling this data set with cubes (like the activity we did in class), how many cubes *total* would you need?
   2. Create a data set that meets the criteria above:

\_\_\_\_\_\_ , \_\_\_\_\_\_ , \_\_\_\_\_\_ , \_\_\_\_\_\_ , \_\_\_\_\_\_ ,

For #4 – 7, create data sets that meet the given criteria. You may round your values to the nearest whole number. (*hint*: think back to the cubes activity we did in class)

1. Contains 5 data points with a median of 18.
2. Contains 6 data points, has a median of 15 and a mean of 25. (Circle one) Is this data set symmetrical, right-skewed or left-skewed?
3. Contains 6 data points, has a median of 15 and a mean of 13. (Circle one) Is this data set symmetrical, right-skewed or left-skewed?
4. In 2010, the mean salary for the top paid 12 members of the Los Angeles Lakers basketball team was $7.8 million and the median was $5.4 million.
   1. Based on this information, what do you know about the number of players who made *more* than $7.8 million?
   2. Based on this information, what do you know about the number of players who made $5.4 million or more?
   3. Is this data set symmetrical, right-skewed or left-skewed? How do you know?
   4. Create a data set the fits the criteria above.