MEASURES OF CENTRAL TENDENCY NOTES

**Definition:** a measure that tells us where the middle of a bunch of data lies

**Mode**
- **most repeated** number in a data set (list of numbers)
- could be none, one, or more than one
- must be a number that appears in the data set (list of numbers)

**Median**
- **middle number** in a data set (list of numbers)
- numbers must be put in order before the median can be found
- if there is an odd number of data pieces…the median will be a number that appears in the data set
- if there is an even number of data pieces…the median may not be a number that appears in the data set, but must be a number between the lowest and highest data pieces in the set
- if there are 2 numbers in the middle…find the middle of the middles
- always the same number of data pieces above and below the median
  - best measure of central tendency when there is a data piece that is a lot higher or lower than the other data pieces

**Mean**
- the **average**
- tells what each data piece would be if they were all the same
- the sum of the data set (list of numbers) divided by the number of data pieces
- will be a number between the lowest and highest data piece
- does not have to be a number that appears in the data set
  - most common measure of central tendency…not the best when it is higher or lower than the majority of the data pieces in the set

**Range**
- **not** a measure of central tendency…rather a measure of variance
- the **distance between** the highest data piece and the lowest data piece
- how far **spread** out the numbers are in a data set (list of numbers)
- subtract the lowest number from the highest number
- may not be a number that appears in the data set (list of numbers) or a number that is between the lowest and highest data piece in the set
  - the smaller the range the closer the data pieces are to one another