AFM Unit 5 Notes Name: _____

5 Number Summary:

Made up of the following:

1. minimum
2. quartile 1 (lower quartile)
3. median
4. quartile 3 (upper quartile)
5. maximum

How to find these using your calculator:

0.96	0.84	0.59	0.57	0.91	0.75	1.03
0.97	0.87	0.59	0.58	0.74	0.68	1.37
0.80	0.64	0.62	0.67	0.76	0.76	1.14
1.03	0.80	0.71	0.83	0.92	0.68	1.09

1. Enter data into your calculator (STAT→EDIT)
2. Quit out of the screen (2nd→MODE)
3. Calculate statistics (STAT→CALC→1-Var Stats)
   a. List: L1
   b. FreqList: (leave blank)
   c. Calculate (press ENTER)
4. Scroll down
   a. minx: 0.57
   b. Q1: 0.675
   c. Med: 0.78
   d. Q3: 0.93
   e. MaxX: 1.37

Interquartile Range:

- $Q3 - Q1 =$ 0.94 − 0.675 = 0.265

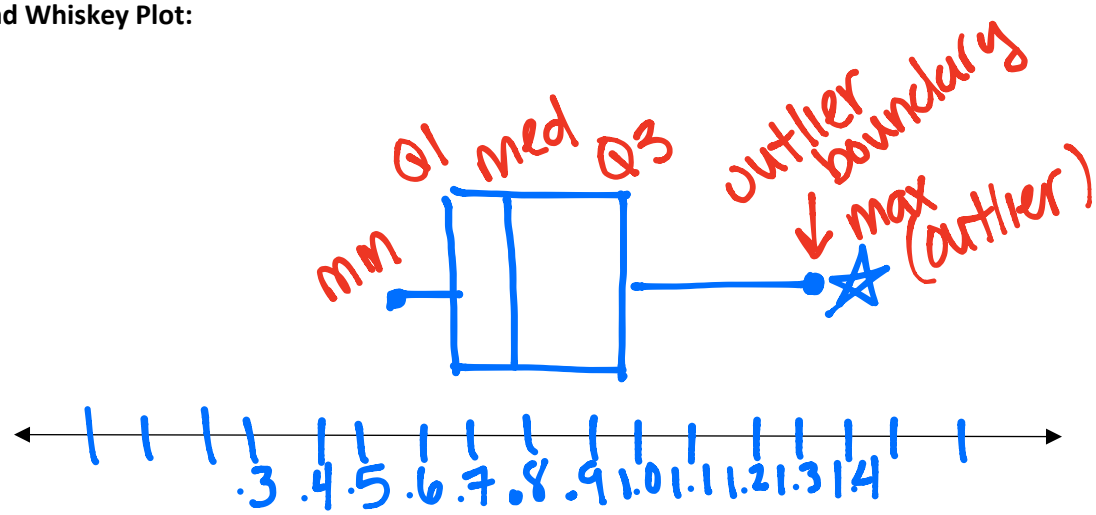
Outliers:

lower
- $Q1 - 1.5(IQR) =$ 0.675−1.5(0.265)=0.2775

upper
- $Q3 + 1.5(IQR) =$ 0.94+1.5(0.265)=1.3375

If any data values fall outside of the numbers above, then you will have outliers. If all the data values fall inside of the numbers above, then you will have **NO** outliers. ☆ outlier @ 1.37 ☆

Box and Whiskey Plot:



Spread of Data: (you will find these all using your calculator and the data from above)

- Mean:
  - When talking about a sample: $\bar{x} =$ 0.818
  - When talking about a population: $\mu =$ calculator doesn't distinguish
- Range: $maxX - minX =$ 1.37−0.57=0.8
- Standard Deviation:
  - When talking about a sample: $s_x =$ 0.194
  - When talking about a population: $\sigma_x =$ 0.191
- Mode:
  1. Sort list of data from smallest to largest (STAT→SortA(→2nd→1→ENTER)
  2. View list (STAT→Edit)
  3. Look for repeat numbers and keep track of how many each repeat has on a paper

- Number: 0.59 Repeated 2 times
- Number: 0.68 Repeated 2 times
- Number: 0.76 Repeated 2 times
- Number: 0.8 Repeated 2 times
- Number: 1.03 Repeated 2 times

4. The number (or numbers) that repeat the most is/are the mode (or modes) of the data
5. The mode of the data is: 0.59, 0.68, 0.76, 0.8, 1.03