

Box plots and Measures of Variation:

*When given a Set of Data follow the Steps below:

10, 8, 9, 7, 10, 12, 14, 14, 10, 16

Step 1: Put the numbers in order. Least \rightarrow Greatest.

7, 8, 9, 10, 10, 10, 12, 14, 14, 16

Step 2: Find the Median. when there are 2 numbers, draw a line down the center of the 2 numbers and insert the Median.

7, 8, 9, 10, 10, 10, 12, 14, 14, 16
10 median

Step 3: Now find the median of the numbers to the left of the median in Step 2.

This is known as Quartile 1 = Q1

7, 8, 9, 10, 10, 10, 12, 14, 14, 16

Q1
9
10
Median

Step 4: Complete the Same Process in Step 3, but only find the median of the numbers to the Right of the Median. Quartile 3 = Q3

7, 8, 9, 10, 10, 10, 12, 14, 14, 16

Q1
9
10
Q3

over \rightarrow

Drawing a Box Plot:

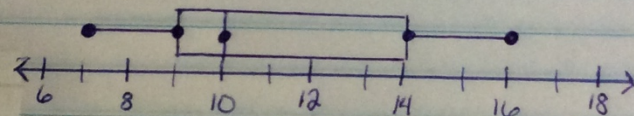
Step 5: Begin to Draw your Box Plot.

* Create a number line*

* Put a dot at your Median, Q1, Q3

* Connect all 3 numbers/dots to make a box, then draw a line down the center dot.

M=10 Q1=9 Q3=14



Step 6: Put a dot at your Smallest Number and Largest Number and connect to the box with a Straight Line.

* To Find Interquartile Range you Subtract $Q3 - Q1$.

