Mean
Median
Mode
Range

a. the number that appears most often.
b. the average of a set of numbers.
c. the difference from of the largest number and the smallest.
d. the number in the middle when data is arranged in order.

1. What is the median of the data represented in the graph?
   a) 35   b) 75   c) 65   d) 55

2. What is the Upper Quartile?
   a) 65   b) 70   c) 85   d) 75

3. What is the minimum value according to this graph?
   a) 13   b) 35   c) 17   d) 100

4. What is the range of the data set?

5. What is the interquartile range?
Remember:
The measures of central tendency are numbers that describe a set of data. The mean, median, and mode are the measures of central tendency.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
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<tbody>
<tr>
<td>MEAN</td>
<td>The average of the data divided by the number of values in the data set. *Round to the nearest tenth if necessary!</td>
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| MEDIAN  | • For an odd amount of values – The median is the middle value of the set that is in order from least to greatest.  
• For an even amount of values – The median is the mean of the two middle values. |
| MODE    | The value(s) that occur most often.  
• A data set may have more than one mode.  
• If there is no value that occurs more than once, then there is no mode. |

The RANGE of a set of data is not a measure of central tendency. To find the range, subtract the lowest value of the data from the highest.

An outlier is a value that is either far less than or far greater than the rest of the values in the data set. For example: Unfortunately, my age is an outlier from all of your ages!

In order to find the best measure of central tendency:  
• Do not pick the mean if there is an outlier.  
• Do not pick the mode if it is the highest or lowest value.  
• Never pick the range - it is not a measure of central tendency!!
1) The double box plot below shows the cost of jeans at two different stores.

![Cost of Jeans ($) graph]

a) Compare the median prices at the two stores.

b) Calculate the two measures of variation for Mean Jean. 
   (Hint: range and interquartile range)

c) Which store has 25% priced between $75 and $100?

d) Which store has 50% priced between $55 and $65?

e) Which store is more expensive? Explain how you determined your answer.
2) The double dot plot shows the gas mileage, in miles per gallon for several cars and SUVs.

a) Find the median for both the SUVs and Cars.

b) Compare the average gas mileage of a car to a SUV.

c) Which has a greater variation? How do you know?

d) Which has better gas mileage? Explain how you determined your answer.