

Accuplacer Study Modules

TOPIC: Mean, Median and Mode (but mostly Mean)

Youtube link: <https://www.youtube.com/watch?v=nVbF2voBD9k>

Steps to find the **MODE**:

- The mode is the number that occurs most in a data set. With MODE there can be one answer, multiple answers or even NO answers.
 - Step 1: Align data values from least to greatest
 - Step 2: Find the number (or numbers) that occur the largest number of times
 - Step 3: You're done!
 - Why is mode important?
 - It shows you the data value that occurs the greatest number of times!

Steps to find the **MEDIAN**:

- The median is the number that occurs in the middle of the data set when arranged from least to greatest.
 - Step 1: Align data values from least to greatest
 - Step 2: Find the number that is in the MIDDLE of the data set (There are an even number of data values above and below)
 - Special case: If there are two numbers in the middle add them together and divide by two
 - Step 3: You're done!
 - Why is the median important?
 - It shows you the middle of your data set. It may be the best indicator of the center of your data set if there are data values that are significantly different from the bulk of the other data.

Steps to find the **MEAN**:

I MEAN this is the most important (HA!)

- The mean is the AVERAGE of your data set.
 - Step 1: add up all the individual data values
 - Step 2: Divide the sum of the data values by the number of data values there are
 - Step 3: You're done!
 - Why is the mean important?
 - Mean is arguably one of the most common methods to determine the measure of center for a data set. However it is the most affected by data values that significantly different from the bulk of the other data.

EXAMPLE!!!

Let's find the MODE, the MEDIAN and the MEAN for the data set below:

9, 12, 7, 12, 34, 22, 9, 20, 13, 15, 7, 10, 12, 21, 17, 19

MODE:

Step 1: Align the data values from least to greatest

7, 7, 9, 9, 10, 12, 12, 12, 13, 14, 17, 19, 20, 21, 22, 34

Step 2: Which data value appears the most?

7, 7, 9, 9, 10, 12, 12, 12, 13, 14, 17, 19, 20, 21, 22, 34

12 appears the greatest number of times, therefore it is the MODE!

Hypothetical: If there was one less 12, what would be the MODE?

Answer: 7, 9 and 12 would all be the mode.

MEDIAN:

Step 1: Align the data values from least to greatest

7, 7, 9, 9, 10, 12, 12, 12, 13, 14, 17, 19, 20, 21, 22, 34

Step 2: Identify the number in the direct middle of the data set

7, 7, 9, 9, 10, 12, 12, 12, 13, 14, 17, 19, 20, 21, 22, 34

12 and 13 are in the middle of the data set. There are 7 data values above and 7 data values below 12 and 13.

Special case: $\frac{(12+13)}{2} = 12.5$, the median is 12.5

MEAN:

Step 1: Add the data values

$$7+ 7 + 9 + 9 + 10+ 12+ 12+ 12+ 13+ 14+ 17+ 19+ 20+ 21+ 22+ 34 = 238$$

Step 2: Divide the sum by the sum by the total number of data values

$$\frac{238}{16} = 14.88$$

The mean is 14.88!

Why is the MEAN larger than the MEDIAN?

The mean is affected by the data value 34 and is thus larger.