Name: _____ Date: _____

Measures of Central Tendency (Preview)

"Middle" is a loaded word in mathematics. When we talk about the "middle" of a set of data, there are three main possibilities: **mean, median, and mode**.

Mean: What we usually consider to be the "average". Add the numbers up, divide by how many numbers you just added.

Median: Put the numbers in order. The median is the middle number. We mark it with a circle. If there are a pair in the middle, add them and divide by two. We mark this with a line between the pair of numbers.

Mode: The number that shows up the most. If there is a tie, we can have two modes, but if there are more than 2, we say there aren't any.

IQR (Inter-Quartile Range): Find the median of the data. This is the 2nd Quartile (Q_2). Find the median of the left-hand half of the data. This is the 1st Quartile (Q_1). Find the median of the right-hand half of the data. This is the 3rd Quartile (Q_3). The IQR is $Q_3 - Q_1$.

Find the mean, median, mode, and IQR for the following data:

1, 3, 18, 24, 7, 3, 12, 6, 22, 9, 3, 10, 12

Mean:_____   Median:_____   Mode:_____   IQR:_____

Calculator Help:

(TI-84)

1. Hit the STAT button
2. Select #1 EDIT…
3. Enter the data into L_1
4. Hit the STAT button again
5. Go over to the right and select CALC
6. #1: 1-Var Stats
7. Hit Enter three times

(TI-36X Pro)

1. Hit the DATA button
2. Enter the data into L_1
3. Hit 2nd DATA
4. Select #2: 1-Var Stats
5. Hit Enter three times

Scroll down and you will now see **Mean, **number of terms**, **Min, Q₁, Med, Q₃, Max****

You try: 2, 4, 1, 4, 2, 2, 7, 4

Mean:_____   Median:_____   Mode:_____   IQR:_____

Mean Absolute Deviation (MAD)

There is a formula for this on the formula sheet. I don't recommend using it. These are the steps you should use to find Mean Absolute Deviation (MAD):

1. Find $\bar{x}$, which is the mean of the data given.
2. Subtract each data point from the mean.
3. Take the absolute value of each result from Step 2.
4. Find the mean average of your results from Step 3.

Find the Mean Absolute Deviation for the following set of numbers
{13, 14, 18, 13, 12, 17, 15, 12, 13, 19, 11, 14, 14, 18, 22}

You try:
Find the Mean Absolute Deviation for the following set of numbers
{68, 70, 75, 73, 74, 72, 65, 80, 71}