Statistics Review

Consider the following test scores:

86, 91, 76, 88, 93, 89, 91, 93

Calculate the mean and median.

$\frac{698}{8} = 87.25$

These are considered measures of center*

Formula:

$\text{Mean} = \frac{\text{Sum of all values}}{\text{Number of values}}$

$\text{Median} = \text{Middle value when data is ordered}$

What is the mode?

91 (occurs the MOST)

Find the quartiles and construct a box (and whisker) plot.

Q1 = 84
Q2 = 89
Q3 = 91

What is the IQR (Inter-Quartile Range)?

$IQR = Q_3 - Q_1 = 91 - 84 = 7$ (range of middle 50%)

Calculate the MAD (Mean Absolute Deviation).

$\text{MAD} = \frac{\sum |x_i - \text{Mean}|}{n}$

Mean = 87.25

MAD = $\frac{1.25 + 3.75 + 1.75 + 2.75 + 5.75}{5} = 3.9375$ (MAD)

*IQR and MAD give information about the spread of the data*

*These are considered measures of center*