Mean Absolute Deviation	**Definition:** Average absolute value of the difference between each data point and the mean. It essentially takes the average distance of the data points from the mean. A data set with a smaller mean absolute deviation has data values that are closer to the mean than a data set with a great mean absolute deviation. The greater the mean absolute deviation, the more the data is spread out. The formula for mean absolute deviation is: $\frac{\sum_{i=1}^{N} \left\| x_i - \overline{x} \right\|}{N}$ X_1 = data value $\overline{x}$ = mean $\sum$ = sum N = number of data values **Calculation:** - **1. Find the mean of the set of numbers** **2. How far away is each number from the mean? (only positive values)** **3. Find the mean of the step 2**

Example: Find the MAD of the following numbers.

a. 76 77 79 80 82 88 90 92 95

b. 15, 10, 12, 18, 10, 22

c. 128, 152, 170, 41, 161

d. 44, 67, 52, 72, 82, 55, 70, 200, 55, 57, 68

e. 43, 69, 49, 78, 88, 54, 73, 194, 54, 59, 70

f. 40, 62, 47, 68, 12, 78, 49, 65, 49, 52, 63