This graphic organizer might help you determine which data values are useful for determining each of the statistics.

data values from least to greatest								
median (the middle value or the average of the two middle values)								
values of the first half of the data								
Q1 (the median of the first half of the data)								
values of the second half of the data								
Q3 (the median of the second half of the data)								

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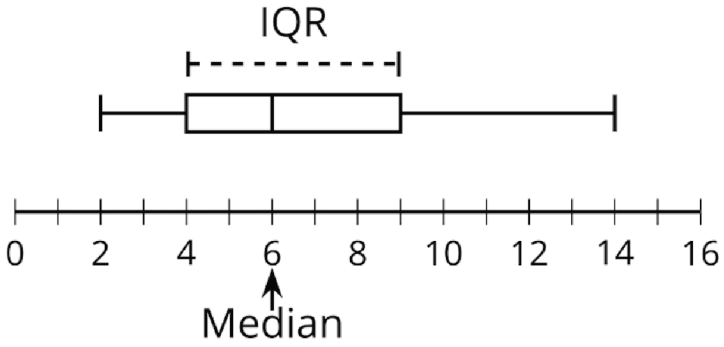
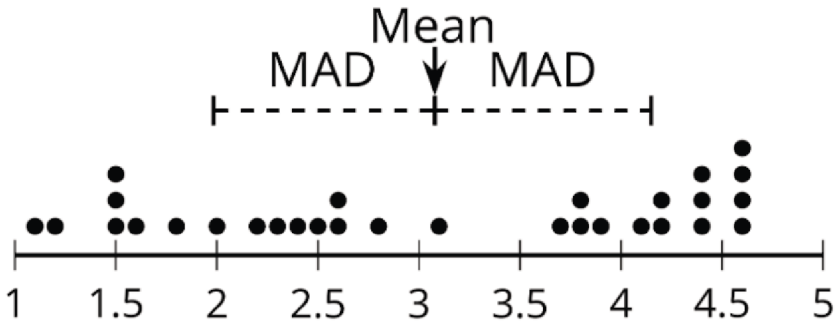
Algebra 1 Unit 1 Useful Terms and Displays

Median: A measure of center that divides the data so that the number of values less than or equal to the median is the same as the number of values that are greater than or equal to the median. Medians are easiest to see in a box plot.



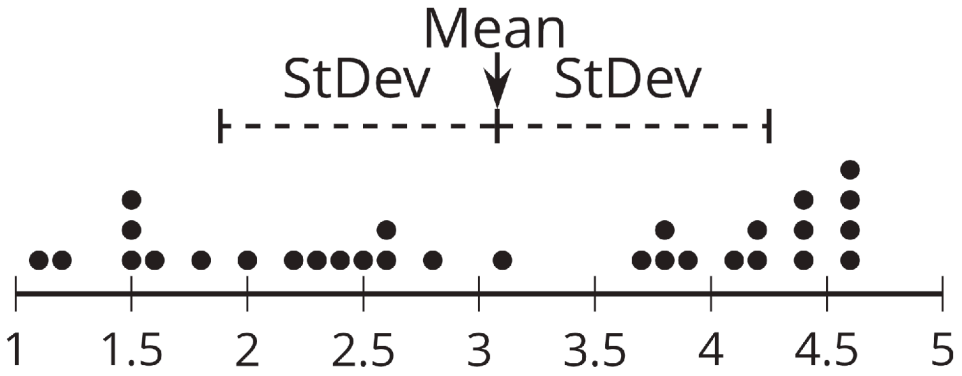
Mean: Also called the average, it is the value you get by adding up all of the values in the set and dividing by the number of values in the set.



Interquartile range (IQR): A measure of variability determined by the range of values for the middle half of the data. Often used with median, this value can be determined by subtracting Q1 – Q3. In the box plot shown here, the IQR is 5 (because 9 – 4 = 5).

Mean absolute deviation (MAD): A measure of variability determined by the mean of the distances of the data points from the mean of the distribution. Often used with mean, this value is related to how widely the data are spread.

Standard deviation: A measure of the variability, or spread, of a distribution, calculated by a method similar to the method for calculating the MAD (mean absolute deviation). The exact method is studied in more advanced courses.



Outlier: A data value that is unusual in that it differs quite a bit from the other values in the data set. In the box plot shown, the minimum, 1, and the maximum, 24, are both outliers because they are more than 1.5 times the interquartile range away from the nearest quartile.