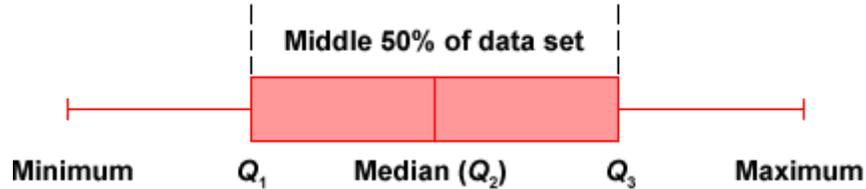


Vocabulary: Box-and-Whisker Plots



Vocabulary

- **Box-and-whisker plot** – a graph that indicates the median, the middle 50%, the maximum, and the minimum value of a data set.



- On a box-and-whisker plot, the middle 50% of a data set is shown by the width (or height) and position of a rectangle. This is the “box” in a box-and-whisker plot.
- The median of the data set is indicated by a line inside the box.
- The maximum and minimum values are indicated by the endpoints of line segments (“whiskers”) that extend away from the box.
- **Interquartile range** – the difference between the first and third quartiles of a data set. This is equal to the range of the middle 50% of the data set.
 - The abbreviation for interquartile range is “IQR.”
 - For example, if Q_1 is 3 and Q_3 is 11, then $IQR = 11 - 3 = 8$.
- **Maximum** – the greatest value in a data set.
- **Median** – the middle value in a set of numbers.
 - Before finding the median, all data should be in order from least to greatest.
 - If there is an odd number of values, the median is the middle number.
 - For example, the median of the data set 2, 3, 5, 6, 8 is 5.
 - If there is an even number of values, the median is the mean of the middle two values.
 - For example, the median of the data set 3, 5, 6, 8 is $\frac{5+6}{2} = \frac{11}{2} = 5.5$.
- **Minimum** – the least value in a data set.
- **Quartile** – one of three values that divide a data set into quarters.
 - The second quartile (Q_2) is the median of the data set.
 - The first quartile (Q_1) is the median of the values that are less than Q_2 .
 - The third quartile (Q_3) is the median of the values that are greater than Q_2 .
 - In a box-and-whisker plot, Q_1 and Q_3 form the sides of the box, while Q_2 (the median) is indicated by a line inside the box.