

M9L9.1 Measures of Center and Spread

Objective: We will be able to describe and compare data sets.

Vocabulary

Mean- is the sum of the values in the set divided by the number of values in the set.

Median- is the middle value in a set when the values are arranged in numerical order.

Range- is the difference between the greatest and the least data values.

Vocabulary

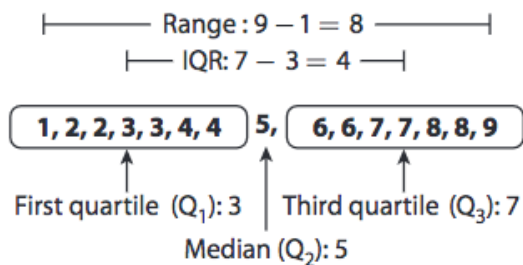
Quartiles- are values that divide a data set into four equal parts.

First quartile (Q_1)- is the median of the lower half of the set.

Second quartile (Q_2)- is the median of the whole set.

Third quartile (Q_3)- is the median of the upper half of the set.

Interquartile range (IQR) - of a data set is the difference between the third and first quartiles. It represents the range of the middle half of the data.



NOTE: Measures of spread are used to describe the consistency of data values. They show the distance between data values and their distance from the center of the data. Two commonly used measures of spread for a set of numerical data are the range and interquartile range (IQR).

1 Example Find the median, range, and interquartile range for the given data set.

The April high temperatures for 5 years in Boston are 77 °F, 86 °F, 84 °F, 93°F, and 90°F

The median is _____.

The range is _____.

The IQR is _____.

2 **Example** Find the median, range, and interquartile range for the given data set.

The numbers of runs scored by a softball team in 20 games are given.

3, 4, 8, 12, 7, 5, 4, 12, 3, 9, 11, 4, 14, 8, 2, 10, 3, 10, 9, 7

The median is _____.

The range is _____.

The IQR is _____.

3 **Example** Find the median, range, and interquartile range for the given data set.

21, 31, 26, 24, 28, 26

The median is _____.

The range is _____.

The IQR is _____.

4 Example

Find the median, range, and interquartile range for the given data set.

The high temperatures in degrees Fahrenheit on 11 days were 68, 71, 75, 74, 75, 71, 73, 71, 72, 74, and 79.

The median is _____.

The range is _____.

The IQR is _____.