**1. Measures of central tendency help to find the middle, or the \_\_\_ of a data set.**

1. Average
2. Distribution
3. Integration and differential
4. None of the mentioned above

**Answer:** A) Average

**Explanation:**

Measures of central tendency aid in the discovery of the middle, or the average, of a data set of observations. A single value that attempts to describe a set of data by identifying the central position within that set of data is referred to as a measure of central tendency (or central tendency index). As a result, measures of central tendency are also referred to as measures of central location in some cases.

**2. Amongst which of the following is / are the measures of central tendency -**

1. Mean
2. Median
3. Mode
4. All of the mentioned above

**Answer:** D) All of the mentioned above

**Explanation:**

The mode, median, and mean are the three most commonly used measures of central tendency. The mean is calculated by dividing the sum of all values by the total number of values. In an ordered data set, the median is the number in the middle, whereas the mode is the most frequent value.

**3. A data set is a distribution of n number of scores or values.**

1. True
2. False

**Answer:** A) True

**Explanation:**

When all possible values for a data set are plotted on a frequency graph, the shape of the graph represents the distribution of the data set. The majority of the time, we are unable to collect all of the data for our variable of interest. As a result, we collect a sample. The results of this sample are used to draw conclusions about the entire data set.

**4. In a \_\_\_, data is symmetrically distributed with no skew.**

1. Normal distribution
2. Binomial distribution
3. Bernoulli distribution
4. None of the mentioned above

**Answer:** A) Normal distribution

**Explanation:**

A normal distribution is characterized by data that is symmetrically distributed and does not have any skew. The majority of the values are concentrated around a central region, with values diminishing as they move further away from the center. In a normal distribution, the mean, the mode, and the median are all exactly the same.

**5. In \_\_\_, more values fall on one side of the center than the other, and the mean, median and mode all differ from each other.**

1. Normal distribution
2. Skewed distribution
3. Parallel distribution
4. None of the mentioned above

**Answer:** B) Skewed distribution

**Explanation:**

In skewed distributions, more values are found on one side of the center than on the other, and the mean, median, and mode are all different from one another as a result. The tail of one side is more spread out and longer than the tail of the other, with fewer scores at one end than the tail of the other. The direction of this tail indicates which side of the skew it is on. The right-hand tail of a positively skewed distribution has a cluster of lower scores on the left and a more widely spread-out tail on the right. In a negatively skewed distribution, there is a cluster of higher scores on the right side of the distribution, and a spread-out tail on the left side.

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**6. The mode is the most frequently occurring value in the data set. It's possible to have \_\_\_.**

1. No mode
2. One mode
3. More than one mode
4. All of the mentioned above

**Answer:** D) All of the mentioned above

**Explanation:**

The mode is defined as the value that appears the most frequently in the data set. It is possible to have no mode, only one mode, or multiple modes at the same time. To find the mode, sort your data set numerically or categorically, and then choose the response that occurs the most frequently from the results.

**7. The range is given as the smallest and \_\_\_ observations.**

1. Largest
2. Medium
3. Mean
4. None of the mentioned above

**Answer:** A) Largest

**Explanation:**

The range is defined as the difference between the smallest and largest observations. This is the most straightforward way to assess variability. In statistics, a range is defined by the difference between two numbers, rather than the difference between the smallest and largest numbers. It is extremely useful for certain types of data.

**8. A \_\_\_ is a statistical term that describes a division of observations into four defined intervals.**

1. Quartile
2. Mean
3. Median
4. All of the mentioned above

**Answer:** B) Mean

**Explanation:**

Quarterlines are statistical terms that describe the division of observations into four defined intervals based on the values of the data and how they compare to the entire set of observations. Quartiles are used in data analysis to describe the division of observations into four defined intervals.

**9. The difference between the upper and lower quartile is known as the interquartile range.**

1. True
2. False

**Answer:** A) True

**Explanation:**

The interquartile range (IQR) is a statistical measure of the spread of your data's middle half. It represents the range of values for the middle 50% of your sample. The interquartile range (IQR) can be used to determine the variability in the areas where the majority of your values are found. Larger values indicate that the central portion of your data has spread out further than the rest of your information. Smaller values, on the other hand, indicate that the middle values are more tightly clustered.

The formula for the interquartile range is given below - **Interquartile range = Upper Quartile – Lower Quartile = Q­3 – Q­1**

Where Q1 represents the first quartile of the series and Q3 represents the third quartile of the series.

**10. The lowest quartile (Q1) refers the smallest quarter of values in the dataset. The upper quartile (Q4) refers the \_\_\_ quarter of values.**

1. Highest
2. Lowest
3. Central one
4. None of the mentioned above

**Answer:** A) Highest

**Explanation:**

The first quartile (Q1) of your dataset contains the values that make up the smallest quarter of the total. The upper quartile (Q4) contains the values that are the highest quarter of the distribution. The interquartile range (IQR) is the half of the data that falls between the upper and lower quartiles, and it is defined as follows: If you want to visualize the interquartile range, think of your data as being divided into quarters. Quarters are referred to as quartiles by statisticians, and they are labelled as Q1, Q2, Q3, and Q4 in descending order from low to high.