Frequently Asked Questions

1. What is a mean?

Answer: Means are mathematical formulations used to characterize the central tendency of a set of numbers.

2. What is a geometric mean?

Answer: Geometric mean is the 'nth' root of the product of 'n' items of a series.

3. What is the difference between arithmetic mean and geometric mean

Answer: The "arithmetic mean", is also commonly called an average whereas, the Geometric mean is the 'nth' root of the product of 'n' items of a series.

4. How is the geometric mean calculated for a continuous frequency distribution? **Answer:** The geometric mean for a continuous frequency distribution is calculated by finding the mid values of the classes. Then, by taking the logarithms of the mid value, multiply these logarithms with the respective frequencies. Now, obtain the total of Σ f logm, divide Σ f logm by N(total of frequency), then take the antilog of the value so obtained, this gives the value of the geometric mean.

5. Where do we use a compound interest formula?

Answer: The most generally useful interpretation of this term is the constant percentage rate of change which if applied each year would take us from the first to the last figure.

6. What logarithm base should we use in calculating geometric mean?

Answer: It does not matter what logarithm base you use, so long as you are consistent. If the logarithms in step 1 are common (base 10) logs, then the geometric mean in step 3 is computed by taking 10 to the power of the mean of the logarithms. If the logarithms in step 1 are natural, then step 3 is computed by taking e to that power.

7. What is a Harmonic Mean?

Answer: Harmonic mean is quotient of "number of the given values" and "sum of the reciprocals of the given values.

8. How do we calculate a Harmonic Mean?

Answer: We calculate a Harmonic Mean by obtaining the reciprocals of the various items and apply the formulae $HM=N/\Sigma(1/x)$.

9. What is a weighted mean?

Answer: The weighted mean is similar to an arithmetic mean (the most common type of average), where instead of each of the data points contributing equally to the final average, some data points contribute more than others. The notion of weighted mean plays a role in descriptive statistics and also occurs in a more general form in several other areas of mathematics.

10. What are the weighted versions of mean?

Answer: The term weighted average usually refers to a weighted arithmetic mean, but weighted versions of other means can also be calculated, such as the weighted geometric mean and the weighted harmonic mean.

11. How do we calculate the weighted geometric mean?

Answer: To calculate the weighted geometric mean we use the following formula: Weighted geometric mean is equal to the antilog of summation of the product of weights and the

logarithms of X divided by the summation of weights. We use the logarithms to calculate the geometric mean as it is difficult to find the nth root.

12. What is weighted harmonic mean?

Answer: Harmonic mean is quotient of "number of the given values" and "sum of the reciprocals of the given values". Harmonic mean is another measure of central tendency and also based on mathematic footing like arithmetic mean and geometric mean.

13. How do we calculate a weighted Arithmetic mean?

Answer: To calculate the weights arithmetic mean we use the following formula: weighted arithmetic mean is equal to the summation of the product of the weights and the variable divided by the total weights.

14. What is truncated mean?

Answer: A truncated mean or trimmed mean is a statistical measure of central tendency, much like the mean and median. It involves the calculation of the mean after discarding given parts of a probability distribution or sample at the high and low end, and typically discarding an equal amount of both.

15. What is the other name for truncated mean? **Answer:** Truncated mean is also known as Windsor mean.