Properties of A.M, G.M,

- The geometric mean of a given data set is consistently lower than its corresponding arithmetic mean.
- When each element in the data set is substituted with its geometric mean, the product of the elements remains unchanged.
- The ratio of geometric means in two series is equal to the ratio of their observations.
- The product of corresponding elements' geometric means in two series is equal to the product of their geometric means.

- The sum of the deviations of a set of data from their arithmetic means is zero, expressed as
$$\sum(x_i - \overline{x}) = 0.$$
- The minimum sum of squared deviations in a set of data occurs when calculated around the mean.
- When the number of classes is limited and the data consists of smaller measurements, the direct method is preferable over the three methods to compute the arithmetic mean.
- The step deviation method is most effective when dealing with a grouped frequency distribution where the class interval width remains constant, and a substantial number of class intervals are present.
- If all observations in a given data set are equal (denoted as 'x'), then the arithmetic mean is also equal to 'x.'
- Adjusting every value in a data set by a specified weight results in an equivalent increase or decrease in the mean by the same value.
- Similarly, multiplying or dividing every value in the data set by a specified weight leads to a proportional multiplication or division of the mean by the exact same factor.