WORKSHEET SET 6
STATISTICS

Q1 ANS: D

Q2 ANS: A

Q3 ANS: A

Q4 ANS: C

Q5 ANS: C

Q6 ANS: A

Q7 ANS: C

Q8 ANS: B

Q9 ANS: B

Q10 ANS: Box plot and Histogram are both used to visually represent the data, but they have different purposes. A histogram is a graphical representation of the distribution of a dataset showing the number of observation that fall within each given range of values. It is used to show distribution of continuous data.
On the other hand, a box plot is standardize way of displaying the distribution of data based on five number summary(Minimum, Q1-first Quantile,Median, Q3-Third Quantile, and maximum).It is used to show the distribution of continuous or discrete data. And also they are used to find if there are any outliers present or not in the dataset.

Q11 ANS: Metrics are measures of quantitative assessment commonly used for assessing, comparing, and tracking performance or production. Generally, a group of metrics will

typically be used to build a dashboard that management or analysts review on a regular basis to maintain performance assessments, opinions, and business strategies.

Choosing Metrics

Every business executive, analyst, portfolio manager, and the project manager has a range of data sources available to them for building and structuring their own metric analysis. This can potentially make it difficult to choose the best metrics needed for important assessments and evaluations. Generally, managers seek to build a dashboard of what has come to be known as key performance indicators (KPIs). In order to establish a useful metric, a manager must first assess its goals. From there, it is important to find the best outputs that measure the activities related to these goals. A final step is also setting goals and targets for KPI metrics that are integrated with business decisions.

Q12 ANS: To assess the statistical significance, you would use hypothesis testing. The null hypothesis and alternate hypothesis would be stated first. Second, you'd calculate the p-value, which is the likelihood of getting the test's observed finding if the null hypothesis is true. Finally, you would select the threshold of significance(alpha) and reject the null hypothesis if the p-value is smaller than the alpha , in other words, the result is statistically significant.

Q13 ANS: 1- Allocation of wealth among individuals

2- Values of oil reserves among oil fields (many small ones, a small number of large ones)

Q14 ANS: It is best to use the median when the distribution is either skewed or there are outliers present. When a distribution is skewed, the median does a better job of describing the center of the distribution than the mean.

Income is the classic example of when to use the median instead of the mean because its distribution tends to be skewed

Q15 ANS: The likelihood is the probability that a particular outcome is observed when the true value of the parameter is equivalent to the probability mass.

Likelihood function is a fundamental concept in statistical inference. It indicates how likely a particular population is to produce an observed sample.