STASTISTICS WORKSHEET_SET 4

1)D

2)A

3)A

4)C

5)A

6)A

7)C

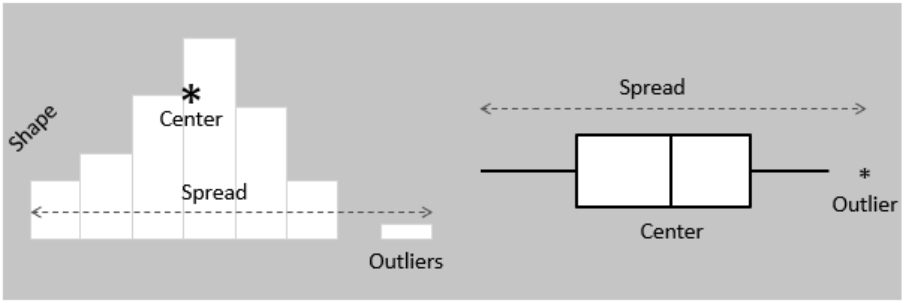
8)B

9)B

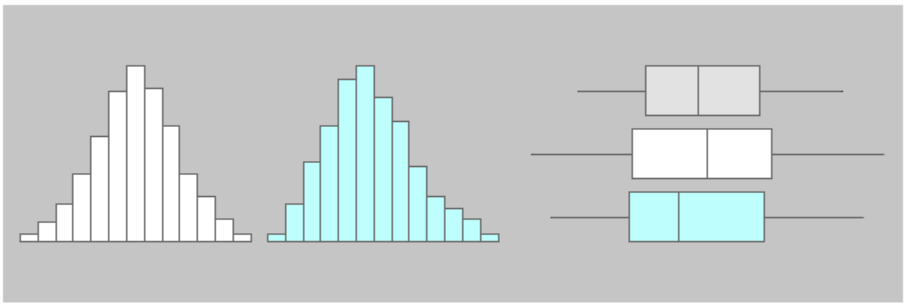
10) What is the difference between a boxplot and histogram?

Ans: Histograms and box plots are graphical representations for the frequency of numeric data values. They aim to describe the data and explore the central tendency and variability before using advanced statistical analysis techniques.

Both histograms and box plots allow to visually assess the central tendency, the amount of variation in the data as well as the presence of gaps, outliers or unusual data points.



Both histograms and box plots are used to explore and present the data in an easy and understandable manner. Histograms are preferred to determine the underlying probability distribution of a data. Box plots on the other hand are more useful when comparing between several data sets. They are less detailed than histograms and take up less space.



11. How to select metrics?

1. Ans: Good metrics are important to your company growth and objectives. Your key metrics should always be closely tied to your primary objective. ...
2. Good metrics can be improved. Good metrics measure progress, which means there needs to be room for improvement. ...
3. Good metrics inspire action.

12. How do you assess the statistical significance of an insight?

Ans: To assess 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 findings 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.

13. Give examples of data that doesnot have a Gaussian distribution, nor log-normal. 14. Give an example where the median is a better measure than the mean.

Ans: Any distribution of money or value will be non--Gaussian. For example: **distributions of income; distributions of house prices; distributions of bets placed on a sporting event**. These distributions cannot have negative values and will usually have extended right hand tails.

15. What is the Likelihood?

Ans: the chance that something will happen **:** PROBABILITY

There's very little *likelihood* of that happening. [=that is very unlikely to happen]

changes that ***in all likelihood*** will be made soon [=changes that are very likely to be made soon]