Statistics Assignment 3

1) B
2) C
3) A
4) A
5) B
6) B
7) B
8) D
9) A

10) Bayes' Theorem states that the conditional probability of an event, based on the occurrence of another event, is equal to the likelihood of the second event given the first event multiplied by the probability of the first event.

$$P(A|B) = \frac{P(A)P(B/A)}{P(B)}$$

11) Z-score is a measure of how many standard deviations a data point is from the mean in a distribution.

12) A t-test is an inferential statistic used to determine if there is a significant difference between the means of two groups and how they are related.

13) A percentile is a comparison score on a scale of one hundred that indicates the percentage of a distribution that is equal to or below it.

14) ANOVA is a statistical formula used to compare variances across the means of different groups.

15) ANOVA is helpful for testing three or more variables. ANOVA groups differences by comparing the means of each group and includes spreading out the variance into diverse sources.