STATISTIC Worksheet-9 - submitted by Sukhpal Singh Int 34

1. C
2. A
3. B
4. B
5. A
6. C
7. C
8. B
9. C
10. A
11. A
12. C
13. The t-distribution and z-distribution are both probability distributions used in statistics.

    The z-distribution is used when we know the population standard deviation, and the t-distribution is used when we don't know the population standard deviation and have to estimate it from the sample data.

    The t-distribution has fatter tails and is more spread out than the z-distribution, which means that it is more forgiving of sample size and is used when we have smaller sample sizes.

    The z-distribution is a normal distribution, and the t-distribution is similar to a normal distribution, but it has more variability due to the estimation of the population standard deviation.

14. The t-distribution is similar to the normal distribution, but it is not exactly normal. The main difference is that the t-distribution has more variability and fatter tails, meaning that it has more probability in the tails of the distribution compared to the normal distribution. This is because the t-distribution is based on a smaller sample size and uses an estimate of the population standard deviation, which introduces more uncertainty. As the sample size increases, the t-distribution becomes more like the normal distribution.

15. The t-distribution is a probability distribution that is used in statistics to help us estimate population parameters, such as the population mean, when we have a small sample size and do not know the population standard deviation. The t-distribution tells us the probability of observing a particular sample mean given the sample size and estimated population standard deviation. It allows us to calculate confidence intervals and perform hypothesis testing to determine whether a sample mean is significantly different from a hypothesized population mean. The t-distribution is a useful tool in many areas of research, including psychology, medicine, and engineering.