1. C
2. B
3. B
4. B
5. C
6. A
7. C
8. B
9. C
10. C
11. A
12. B

13th

T distribution and Z distribution are both probability distributions that are commonly used in statistical analysis.

Z distribution, also known as the standard normal distribution, is a normal distribution with a mean of 0 and a standard deviation of 1. It is often used when the sample size is large (usually greater than 30) and the population standard deviation is known.

T distribution, also known as the student's t-distribution, is a probability distribution that is similar to the normal distribution but with heavier tails. It is used when the sample size is small (usually less than 30) or the population standard deviation is unknown. The shape of the t-distribution varies depending on the sample size, but it approaches the standard normal distribution as the sample size increases.

In summary, the main difference between the two distributions is that the Z distribution is used when the population standard deviation is known and the sample size is large, while the T distribution is used when the population standard deviation is unknown and the sample size is small.

14th

The t-distribution is not a normal distribution, but it is related to the normal distribution.

The t-distribution is used when the sample size is small or the population standard deviation is unknown. It is a probability distribution that is similar in shape to the normal distribution, but with heavier tails.

The t-distribution is centered at 0 and has a parameter called degrees of freedom (df) which determines its shape. As the degrees of freedom increase, the t-distribution becomes closer to the normal distribution.

The t-distribution is often used in hypothesis testing, confidence intervals, and in estimating population means.

15th

The t-distribution, also known as the Student's t-distribution, is a probability distribution that is used to make inferences about the population mean when the sample size is small (typically less than 30) and the population standard deviation is unknown.

In statistical inference, the t-distribution is commonly used in hypothesis testing and confidence interval estimation. It is similar to the standard normal distribution, but with heavier tails, meaning it allows for more extreme values than the normal distribution does.

The t-distribution is used to calculate the t-test statistic, which measures the difference between the sample mean and the hypothesized population mean in terms of the estimated standard error of the sample mean. The t-test is used to determine whether a sample mean is significantly different from the population mean.

The t-distribution is also used to calculate confidence intervals for the population mean. A confidence interval is a range of values that likely contains the true population parameter with a certain degree of confidence.

Overall, the t-distribution is an important statistical tool that helps us to make conclusions about population parameters based on sample statistics when the sample size is small and the population standard deviation is unknown.