Statistics Worksheet

Q1-c. Type I; Type II

Q2-b. We have made a correct decision

Q3-b. critical value

Q4-b. A Type I error was made.

Q5-c. x = 17 s , = 7

Q6-a. fail to reject H0

Q7-c. At α = 0.05, reject the null hypothesis.

Q8-b. 0.041

Q9-b. 0.021

Q10-b. Two tail

Q11-a. Less than the significance level

Q12-b. 0.375

Q13-The standard normal or z-distribution assumes that you know the population standard deviation. The t-distribution is based on the sample standard deviation.

Q14-The t-distribution is a type of normal distribution that is used for smaller sample sizes. Normally-distributed data form a bell shape when plotted on a graph, with more observations near the mean and fewer observations in the tails.

Q15-The t-distribution describes the standardized distances of sample means to the population mean when the population standard deviation is not known, and the observations come from a normally distributed population.