



H0: Residual sugar has no significant impact on the quality of a wine.

Why: I chose ANOVA (F-statistic) because it is designed to compare multiple groups. Since wine quality has 9 levels, ANOVA is ideal for checking if residual sugar differs significantly across these levels. The test evaluates whether the variance between groups is larger than the variance within groups.

p-value = 0.3846

Conclusion: The F-statistic is 1.053 and the p-value is 0.3846. Since the p-value is greater than 0.05, we fail to reject null hypothesis (H0). This means that we do not have sufficient evidence to conclude that residual sugar has a significant impact on wine quality.