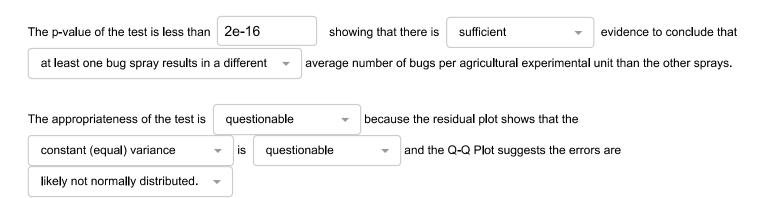This is a review question. It covers one of the topics we have previously studied this semester. It should help you review for the final exam.

Consider the InsectSprays dataset in R.

> ?InsectSprays

Test the hypothesis that the mean number of bugs killed by insectisides A, B, C, D, E, and F are all the same against the alternative that at least one mean is different.

The p-value of the test is less than | 2e-16 | showing that there is | sufficient ▾ | evidence to conclude that

| at least one bug spray results in a different ▾ | average number of bugs per agricultural experimental unit than the other sprays.

The appropriateness of the test is | questionable ▾ | because the residual plot shows that the

| constant (equal) variance ▾ | is | questionable ▾ | and the Q-Q Plot suggests the errors are

| likely not normally distributed. ▾ |

Thus, we should not make any conclusion about these insect sprays until next week when we can use the non-parametric version of ANOVA called the "Kruskal-Wallis Test." In other words, this test is inconclusive due to difficulties with the requirements not being satisfied.