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7. Complete the following assignments prior to Meeting #29:

A. Study our notes from Meeting #28.

B. Study the sample response to Quiz #28's prompt.

C*. Comprehend the following case:

A biologist conducted a study to assess the effects of a particular medication on managing the symptom of a particular viral infection in lab rats. She administered the medication to an experimental group of infected rats and a placebo to a control group of infected rats. She then tested the both groups that produced interval scores reflecting the degree of symptoms of the disease the rats exhibited. Let E = the string of scores from the experimental group and C = the string of scores from the control group. She then employed an F-test of the following null hypothesis:

$$H_o: \mu_E = \mu_C$$

Because the F value was such that $p > 0.05$, the researcher did not reject H_o.

Examine each of the following propositions to determine its true value; indicate your choice by circling either "T" or "F" and then write a paragraph defending you choice; post the resulting document using designated *Canvas* assignment link:

i. The results of the F-test indicated that the difference in the two means is not statistically significant.

(T) F

Because she failed to reject the null hypothisis, The p-value was big and she didnot have enough evidence to reject H_o.

ii. The results of the F-test indicated that it is unlikely that the null hypothesis is true.

T (F)

This is false because we concluded that she did not have enough evidence to reject H_o.

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iii. The results of the *F*-test suggests that there was hardly any difference in the effects of the experimental medication and the placebo on the scores.

T (F)

Since p-val > .05, we can only fail to reject H_0.
That doesn't prove H_0.

iv. The results of the *F*-test indicated that $|\bar{E} - \bar{C}|$ is too near 0 to justify rejecting H_o

(T) F

we found that there was not enough statistical evidence to reject H_0.

D*. Comprehend the following case:

A biologist conducted a study to assess the effects of a particular medication on managing the symptom of a particular viral infection in lab rats. She administered the medication to an experimental group of infected rats and a placebo to a control group of infected rats. She then tested the both groups that produced interval scores reflecting the degree of symptoms of the disease the rats exhibited. Let *E* = the string of scores from the experimental group and *C* = the string of scores from the control group. She then employed an *F*-test of the following null hypothesis:

$H_o: \mu_E = \mu_C$

Because the *F* value was such that $p < 0.05$, the researcher rejected H_o.

Examine each of the following propositions to determine its true value; indicate your choice by circling either "T" or "F" and then write a paragraph defending you choice; post the resulting document using designated *Canvas* assignment link:

i. The results of the *F*-test indicated that the difference in the two means is statistically significant.

(T) F

Because there was a small F-value, we rejected Ho, and that means the results are statistically significant.

ii. The results of the *F*-test indicated that it is unlikely that the null hypothesis is true.

(T) F

Because the results were statistically significant, it is unlikly that we would have selected a sample with as big of differences between the means as we did.

iii. The results of the *F*-test suggests that there was a difference in the effects of the experimental medication and the placebo on the scores.

(T) F

That was the point of the test, and because our test yeilded statistically significant results, we can conclude that.

iv. The results of the *F*-test indicated that the deviation of $|\bar{E} - \bar{C}|$ from 0 is unlikely to be solely a function of sampling error.

(T) F

This shows that there must have been other factors involved, perhaps the effectiveness of the drug.