Primary Research Questions

1. Are there an equal number of male and female performers on Austin City Limits?
2. Are male performers just as likely to have had a Top 10 hit as female performers?

Conduct the Analysis in R

1. Type or copy the script from the Prepare for the Analysis section into the Script window of R.
2. Select the portion of the code you wish to run, then press "ctrl+ enter."
3. Output can be found in the Console window.

(5 points possible)

Goodness of Fit Test

Use the output of your analysis to answer the following questions.

1a. There were _____ male and 35 female artists.

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Answer: 81

1b. The expected counts were _____ artists of each gender.

Answer: 58

1c. Chi Square (rounded to 2 decimal places, with df=1)=

Answer: 18.24

1d. Was the p-value **less than** 0.05?

Answer: Yes

1e. We should _____ the hypothesis that there were an equal number of male and female performers at ACL Live.

reject

Help

Hide Answer *You have used 0 of 2 submissions*

(6 points possible)

Test of Independence

Use the output of your analysis to answer the following questions.

2a. Among the male artists, _____ out of 70 had a Top 10 hit.

Answer: 32

2b. Among the female artists, _____ out of 33 had a Top 10 hit.

Answer: 18

2c. Based on these values, there must have been _____ males and 2 females with missing values for the Top 10 variable.

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Answer: 11

2d. Chi Square (rounded to 3 decimal places, df=1)=

Answer: 0.700

2e. p-value (rounded to 3 decimal places)=

Answer: .403

2f. We should _____ the hypothesis that gender is associated with having a Top 10 hit.

[ ] fail to reject

Help

Hide Answer *You have used 0 of 2 submissions*

(1 point possible)

3. Was the expected counts assumption violated in either of these chi square tests?

- It was violated in the test of independence.
- It was not violated in either test. ✔
- It was violated in both tests.
- It was violated in the goodness of fit test.

CORRECT. THE ASSUMPTIONS FOR BOTH TESTS ARE THE SAME. THESE CONDITIONS--RANDOM SAMPLE, INDEPENDENT OBSERVATIONS, NO EXPECTED COUNTS LESS THAN 1, AND NO MORE THAN 20% OF EXPECTED COUNTS LESS THAN 5--WERE MET FOR BOTH TESTS.

Hide Answer *You have used 0 of 2 submissions*

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