



Bookmarks

▶ Important Pre-Course Survey

▶ Contact Us

▶ How To Navigate the Course

▶ Discussion Board

▶ Office Hours

▶ Week 0: Introduction to Data (Optional Review)

▶ Week 1: Sampling

▶ Week 2: Hypothesis Testing (One Group Means)

▶ Week 3: Hypothesis Testing (Two Group Means)

▼ Week 4: Hypothesis Testing (Categorical Data)

Readings

Week 4: Hypothesis Testing (Categorical Data) > Pre-Lab > Conduct the Analysis



Bookmark

Reflect on the Question

Analyze the Data

Draw Conclusions

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.

(5/5 points)

Goodness of Fit Test


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

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




Answer: 81

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


Reading Check due
May 03, 2016 at 17:00
UTC 

Lecture Videos


Comprehension Check
due May 03, 2016 at
17:00 UTC 

R Tutorial Videos


Pre-Lab

Pre-Lab due May 03,
2016 at 17:00 UTC 

Lab

Lab due May 03, 2016
at 17:00 UTC 

Problem Set

Problem Set due May
03, 2016 at 17:00 UTC 



Answer: 58

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



Answer: 18.24

1d. The p-value was _____ 0.05.



Answer: less than

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



Answer: reject

[Click here for a video explanation of how to answer this question.](#)

You have used 1 of 1 submissions

(6/6 points)

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.

**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 not associated with having a Top 10 hit.

**Answer: fail to reject**

[Click here for a video explanation of how to answer this question.](#)

You have used 1 of 1 submissions

(1/1 point)

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.

[Click here for a video explanation of how to answer this question.](#)

You have used 1 of 1 submissions

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