

Course > Week... > Lab > Analy...

# Analyze the Data

Reflect on the Question

Analyze the Data

Draw Conclusions

## **Primary Research Question**

Among male artists, is there an association between winning a Grammy and the genre of music that he plays?

### **Analysis**

Let's break this question down into the different descriptive statistics that you will need to construct your answer. Be sure that your R output includes all of the following components.

- 1. Subset the data (males only).
- 2. Create a table to show the marginal distributions for Genre and Grammy.
- 3. Create a contingency table to show the conditional distribution for Genre and Grammy.
- 4. Make a bar chart to better visualize how many artists in each Genre received a Grammy.
- 5. Calculate P(A): the probability of winning a Grammy.

- 6. Calculate P(A|B): the probability of winning Grammy, given the artist's Genre.
- 7. Interpret what these probabilities tell us about the relationship between Genre and winning a Grammy.

## problem

8/8 points (graded)

### **Contingency Table**

**Note**: All of the questions below deal with the data frame that contains *males* only.

1) How many male artists won a Grammy?



2) How many male artists did not win a Grammy?



3) Which **genre** had the greatest number of Grammy wins?



4) What is the probability that a randomly selected artist was a **Grammy winner**? (*Report as a proportion rounded to three decimal places*)

Analyze the Data   Lab   UT.7.11x Courseware   edX
<b>✓</b>
bility of winning a Grammy if the artist was a ould divide by (Enter
bility that a randomly-selected Grammy vriter, you would divide by

You have used 1 of 1 attempt

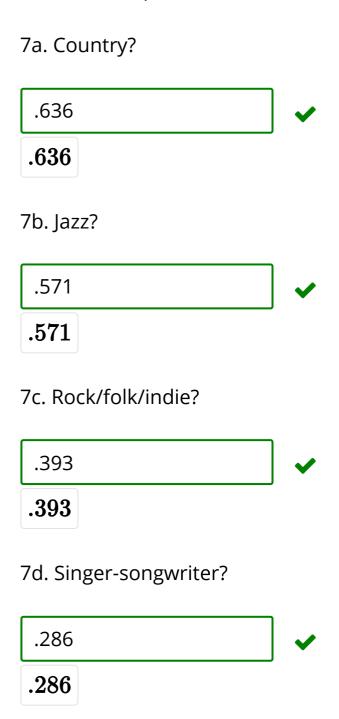
Submit

## problem

5/5 points (graded)

#### **Conditional Probabilities**

What is the probability that a randomly selected male artist *from each of the following genres* won a Grammy? (*Report as proportions rounded to three decimal places.*)



7e. Our **conclusion** should be that winning a Grammy \_\_\_\_\_ independent of Genre.



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