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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. Create a table to show the marginal distributions for Genre and Grammy.
2. Create a contingency table to show the conditional distribution for Genre and Grammy.
3. Make a bar chart to better visualize how many artists in each Genre received a Grammy.
4. Calculate P(A): the probability of winning a Grammy.
5. Calculate P(A|B): the probability of winning Grammy, given the artist's Genre.
6. Interpret what these probabilities tell us about the relationship between Genre and winning a Grammy.

(7/8 points)

Contingency Table

1) How many artists won a Grammy?

49

49

Answer: 49

2) How many artists did not win a Grammy?

67

67

Answer: 67

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

rock/indie/folk   rock/indie/folk

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

0.422

0.422

Answer: 0.422

5) To determine the probability of winning a Grammy if the artist was a **singer-songwriter**, you would divide _____ by _____. (enter numerical values)

5

5

Answer: 5

17

17

Answer: 17

6) To determine the probability that a randomly-selected Grammy winner was a singer-songwriter, you would divide _____ by _____. (enter numerical values)

17

17

Answer: 5

49

49

Answer: 49

Hide Answer   *You have used 1 of 1 submissions*

(1/5 points)

Conditional Probabilities

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

7) Country?

0.245

0.245

Answer: .667

8) Jazz?

0.122

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0.122

Answer: .462

9) Rock/folk/indie?

0.531

0.531

Answer: .382

10) Singer-songwriter?

0.102

0.102

Answer: .294

11) Our **conclusion** should be that winning a Grammy _____ independent of Genre.

is not   is not

Hide Answer   *You have used 1 of 1 submissions*

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