Primary Research Question

For the 2013 season, is there a linear relationship between how often a rider placed in the Top 10 and the number of times he stayed on his bull for a full 8 seconds?

Conduct the Analysis in R

1. Type or copy the script from the 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.

(2/2 points)
What do the histogram and descriptive statistics tell us about the distribution of the **Rides13** variable?

1a. On average, a bull rider in 2013 has how many rides? (Report the median becuase the histogram is not symmetrical.)

19 ✔ **Answer:** 19

19

1b. These bull riders made it into the Top 10 an average of _____ times in 2013. (Hint: Remember again that the histogram is not symmetrical.)

6 ✔ **Answer:** 6

6

Click here for a video explanation of how to answer this question.

Lab due Mar 15, 2016 at 18:00 UTC

Problem Set
Problem Set due Mar 15, 2016 at 18:00 UTC

- Week 4: Bivariate Distributions (Categorical Data)
- Week 5: Linear Functions

You have used 1 of 1 submissions

(4/4 points)

What does the scatterplot show us?

2a. The relationship looks _____, _____, and _____.

linear ✔ **Answer:** linear

moderately strong ✔ **Answer:** moderately strong

positive ✔ **Answer:** positive

2b. It looks like bull riders that appear frequently in the Top 10 list tend to have a _____ number of successful rides.

higher ✔ **Answer:** higher

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions

(2/2 points)

3a. The correlation, rounded to three decimal places, between the number of Top 10 appearances and the number of successful rides for 2013 is r =

0.917 ✔ **Answer:** 0.917

0.917

3b. How many times does this value appear in the correlation matrix? (Report as a numeral)

2 ✔ **Answer:** 2

2

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions

(2/2 points)

4. On the scatterplot, we see a data point with a fairly large residual. This rider had 22 rides, but he only placed in the Top 10 two times. This rider's data point falls _____ the line of best fit. If his data followed the line of best fit, he should have placed in the Top 10 about _____ times.

below ▾ ✔ **Answer:** below

6 ▾ ✔ **Answer:** 6

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions

(1/1 point)

Use this code to help identify this rider:

```
#identify a specific record
which(new_bull$Top10_13==2 & new_bull$Rides13==22)
```

5. After looking at the data for this rider, can you explain **why** he has placed in the Top 10 so few times?

- He weighs more than 200 pounds, so he is too heavy.
- He had only 12 rides, so he was not able to be competitive for the Top 10.
- He did not participate in any events during the 2013 season.
- (●) His ride percentage was only about 33%, which wasn't high enough to place him in the Top 10. ✔

Click here for a video explanation of how to answer this question.

You have used 1 of 1 submissions