Reflect on the Question | Analyze the Data | Draw Conclusions

Primary Research Question

The average American adult man weighs 190 pounds. Do professional bull riders in the US weigh the same?

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.

(1/1 point)
1. Did the histogram of the bull-riders' weights show any significant skew that would **violate** the assumption of Normality?

- Yes
- No ✔

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

You have used 1 of 1 submissions

(2/2 points)

Lab due May 03, 2016 at 17:00 UTC

Problem Set
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Report the **sample statistics** for the bull-rider weights. *(Round to 2 decimal places.)*

2a. Sample mean (in pounds)=

153.11 ✔ **Answer:** 153.11

153.11

2b. Sample standard deviation (in pounds)=

13.02 ✔ **Answer:** 13.02

13.02

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

You have used 1 of 1 submissions

(4/4 points)

One-sample **t test** results:

3a. t-statistic *(rounded to 1 decimal place)* =

-17.2 ✔ **Answer:** -17.2

-17.2

3b. degrees of freedom for the test =

36 ✔ **Answer:** 36

36

95% **confidence interval**:

3c. Lower bound estimate, in pounds *(rounded to 1 decimal place)* =

148.8 ✔ **Answer:** 148.8

148.8

3d. Upper bound estimate, in pounds *(rounded to 1 decimal place)* =

157.4 ✔ **Answer:** 157.5

157.4

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

You have used 1 of 1 submissions

(1 point possible)

4. The **p-value** of the test was very small (< 0.05). How should we interpret this p-value?

- If bull-riders really do weigh 190 pounds on average, observing this sample mean is very unlikely. ✔
- We can only be 5% certain with our results; this test was inconclusive.
- The percent of bull-riders weighing 190 pounds is less than 5%. ✖
- There is a 5% chance that bull-riders weigh 190 pounds on average.

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

You have used 1 of 1 submissions

(2/2 points)

We should _____ the hypothesis that the mean weight of bull riders is equal to 190 lbs. It appears that the bull-riders actually weigh _____ than the average American man.

5a.

reject ✔ **Answer:** reject

5b.

less ▾ ✔ **Answer:** less

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

You have used 1 of 1 submissions