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Primary Research Question

Do professional bull riders stay on their bulls at least 50% of the time? Test the hypothesis that the mean ride percentage is 50%. **(Hint: Two-sided test.)**

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. Calculate the sample mean and standard deviation of ride percentage.
2. Generate a histogram to look at the distribution of ride percentage.
3. Confirm the assumptions of a one-sample t-test
4. Run the t-test and interpret the results.

(2 points possible)

Descriptive Statistics

1a. What was the average ride **percentage**? (round to 1 decimal place)

Answer: 37.5

1b. What was the standard deviation of ride **percentage**? (round to 1 decimal place)

Answer: 12.2

Hide Answer

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(3 points possible)

Test Statistics

2a. What is the value of the **t-statistic**? (round *absolute value* to 2 decimal places)

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Answer: 6.35

2b. How many **degrees of freedom**?

Answer: 37

2c. The **p-value** was _____ 0.001.

less than

Hide Answer

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(1 point possible)

3. What **decision** should you reach, based on these test results?

☐ fail to reject the null hypothesis

☒ reject the null hypothesis ✓

Hide Answer

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(1 point possible)

4. It appears that professional bull riders stay on their bulls:

☐ more than 50% of the time

☒ less than 50% of the time ✓

☐ approximately 50% of the time

Hide Answer

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