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Question 2

Students collected 8 random bags of a specific brand of potato chips and carefully weighed the contents of each bag, recording the following weights (in grams):

29.4   29.0   28.4   28.8   28.9   29.3   28.5   28.2

The students want to test the claim that the mean weight of these bags is 28.5 grams. They think it may be different.

(1 point possible)

2a. What is the appropriate null hypotheses for this test?

- ○ H0: μ > 28.5
- ○ H0: μ = 28.5 ✔
- ○ H0: μ = 0
- ○ H0: μ = 28.5 - 0

Hide Answer   *You have used 0 of 1 submissions*

(1 point possible)

2b. What are the sample mean and standard deviation? *(Round each to 2 decimal places.)*

Mean

Answer: 28.81

Hide Answer   *You have used 0 of 1 submissions*

(1 point possible)

Standard Deviation *(Round to 2 decimal places.)*

Answer: .43

Hide Answer   *You have used 0 of 1 submissions*

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(1 point possible)

2c. What is the **test statistic** for this hypothesis test? Remember: this is the t-statistic for the sample mean. *(Round to 2 decimal places.)*

Answer: 2.04

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(1 point possible)

2d. What is **t-critical** for this test, assuming an alpha level of 0.05? *(Round to 3 decimal places.)*

Answer: 2.365
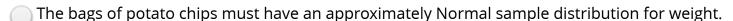
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(1 point possible)

2e. What was the outcome of your test?

○ Confirm the null hypothesis $p > 0.05$

○ Reject the null hypothesis $p < 0.05$

○ Fail to reject the null hypothesis $p > 0.05$ ✔

○ Fail to reject the null hypothesis $p < 0.05$

Hide Answer   *You have used 0 of 1 submissions*

(1 point possible)

2f. In addition to random selection, what other condition of the data must be true for our t-test outcome to be reliable?

○ The bags of potato chips must have an approximately Normal population distribution for weight. ✔

○ The bags of potato chips must have an approximately Normal sample distribution for weight.

○ The bags of potato chips must come from the same manufacturer.

○ Each bag must be related to every other bag in the sample.

Hide Answer   *You have used 0 of 1 submissions*

(1 point possible)

2g. Does your data provide sufficient evidence to suggest that the mean weight of these bags of potato chips is **not** 28.5 g per

bag?

○ Yes

○ No ✔️

Help

| Hide Answer | *You have used 0 of 1 submissions* |

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