



Bookmarks

▶ Important Pre-Course Survey

▶ Contact Us

▶ How To Navigate the Course

▶ Discussion Board

▶ Office Hours

▶ Week 0: Introduction to Data (Optional Review)

▶ Week 1: Sampling

▼ Week 2: Hypothesis Testing (One Group Means)

Readings

Reading Check due May 03, 2016 at 17:00 UTC

Lecture Videos

Comprehension Check due May 03, 2016 at 17:00 UTC

R Tutorial Videos

Pre-Lab

Pre-Lab due May 03, 2016 at 17:00 UTC

Lab

Week 2: Hypothesis Testing (One Group Means) > Problem Set > Question 2



Bookmark

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.

(1/1 point)

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

☐ $H_0: \mu > 28.5$

☒ $H_0: \mu = 28.5$ ✓

☐ $H_0: \mu = 0$

☐ $H_0: \mu = 28.5 - 0$

You have used 1 of 1 submissions

(1/1 point)

Lab due May 03, 2016
at 17:00 UTC

Problem Set

Problem Set due May
03, 2016 at 17:00 UTC

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

Mean

✓ Answer: 28.81

You have used 1 of 1 submissions

(1/1 point)

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

✓ Answer: .43

You have used 1 of 1 submissions

(1 point possible)

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

NOTE: Be sure to use the proper formula and your rounded answers to the previous questions to determine the statistic. If you use R or do not use the rounded values, your answer may be marked incorrect.

✗ Answer: 2.04

You have used 1 of 1 submissions

(1/1 point)

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

✓ Answer: 2.365

You have used 1 of 1 submissions

(1/1 point)

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 $p < 0.05$

You have used 1 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.

?

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

?

You have used 0 of 1 submissions

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