

## UTAustinX: UT.7.20x Foundations of Data Analysis - Part 2



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### 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

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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.

(1/1 point)

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

 $\bigcirc$  H0:  $\mu$  > 28.5

H0:  $\mu$  = 28.5

H0:  $\mu = 0$ 

H0:  $\mu$  = 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 UT 🗗

2b. What are the sample decimal places.)	mean and standard deviation? (Round each to 2
Mean	
28.81	<b>✓</b> Answer: 28.81
28.81	_
You have used 1 of 1 subi	missions
(1/1 point) <b>Standard Deviation</b> (Rou	und to 2 decimal places.)
0.43	✓ Answer: .43
0.43	
You have used 1 of 1 subi	missions
for the sample mean. (Ro NOTE: Be sure to use the the previous questions to	stic for this hypothesis test? This is the t-statistic und to 2 decimal places.)  proper formula and your rounded answers to determine the statistic. If you use R or do not your answer may be marked incorrect.
2.076137	<b>X</b> Answer: 2.04
2.076137	
You have used 1 of 1 sub	missions
(1/1 point) 2d. What is <b>t-critical</b> for t to 3 decimal places.)	this test, assuming an alpha level of 0.05? <i>(Round</i>
2.365	<b>✓ Answer:</b> 2.365
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
  - $\circ$  Fail to reject the null hypothesis p < 0.05

You have used 1 of 1 submissions

(1 point possible)

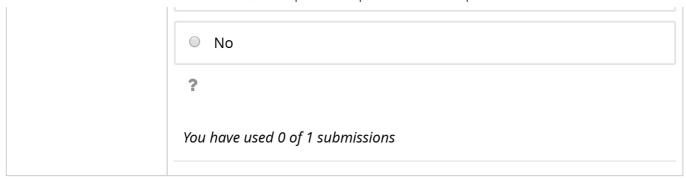
- 2f. In addition to random selection, what other condition of the data must be true for our t-test outcome to be reliable?
  - The bags of potato chips must have an approximately Normal population distribution for weight.
  - The bags of potato chips must have an approximately Normal sample distribution 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



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