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Pablo Gutierrez-Fonseca 500+

Instructor Help

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202301-10557 NR140A Applied Environ Statistics

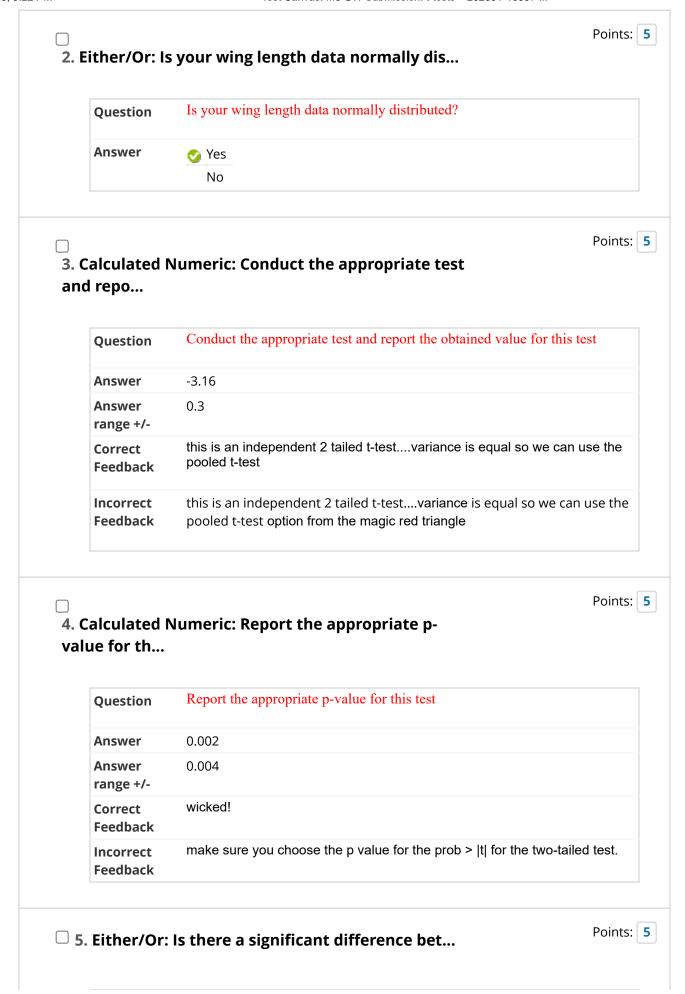
Tests, Surveys, and Pools Tests

Test Canvas: M8 GW Submission: t-tests

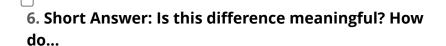
Test Canvas: M8 GW Submission: t-tests

The Test Canvas lets you add, edit, and reorder questions, as well as review a test. More Help

Create Question Reuse Question Upload Questions Question Settings Description Instructions Total Questions 9 **Total Points** 100 Select: All None Select by Type: - Question Type -**Points** Delete Update Hide Question Details Points: 5 1. Calculated Numeric: Report the p-value for the goodness o... Report the p-value for the goodness of fit test for the wing length data Question 0.187 **Answer** 80.0 **Answer** range +/-Correct 0.1870 for anderson darling but shapiro wilks will give a similar result (to accept the null....data is normal) **Feedback** Incorrect 0.1870 for anderson darling but shapiro wilks will give a similar result (to **Feedback** accept the null....data is normal)







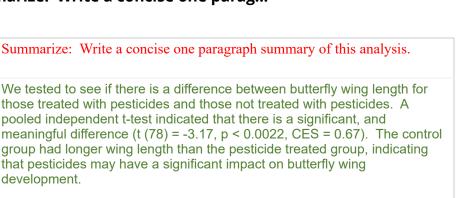
Question	Is this difference meaningful? How do you know?				
Answer	YES, Cohens effect size = 0.67				
	diff/s (s is for the full data set - all observations of wing length) for a more conservative ES estimate.				
	=26.92/40.179 = 0.67				

☐ 7. Essay: Summarize: Write a concise one parag...

Question

Answer

Question



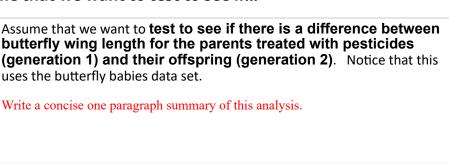
Points: 15

Points: 25

Points: 10

□ 8. Essay: Assume that we want to test to see if...

development.



Answer

We tested to see if there is a difference between butterfly wing length for the parents treated with pesticides (generation 1) and their offspring (generation 2). A 2-tailed matched pairs t-test, indicated that there is a significant, and meaningful difference (t(39) = -6.42 p < 0.0001,Cohens Effect size = 1.02). Generation 2 had significant and meaningfully longer wing length than the parent generation indicating that the stunted growth impact of pesticides on wing development in pesticide exposed butterflies is not carried on to their future generations.

□ 9. Essay: Assume that we want to test to see if...

Points: 25



Question

Assume that we want to **test to see if these babies (generation 2)** are smaller when compared to the larger population of **butterflies in the wild.** Assume (population mean = 640 and population stdev = 30)

Look for keywords to figure out what type of test to run for this.

Write a concise one paragraph summary of this analysis.

Answer

We tested to see if the offspring of pesticide treated butterflies show stunted growth and differ significantly from the larger butterfly population. A 1-tailed, one-sample z-test indicated that there is a significant difference between these offspring and the larger population (z(39) = -1.6495, p = 0.0495). The pesticide treated offspring were indeed significantly smaller than the larger population, indicating that while there may be a recovery over the pesticide impacts to the parent generation, offspring are still stunted compared to normal butterfly development.

Select: All	None Select	by Type:	- Ques	tion Type -	•
Delete	Points	Up	date	Hide Qu	estion Details

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