

Week Five

- ✓ **Video:** 5.1 Statistical Juries
12 min
- ✓ **Reading:** 5.1 Statistical Juries
10 min
- ✓ **Video:** 5.2 Type I and Type II errors
11 min
- ✓ **Reading:** 5.2 Type I and Type II errors
10 min
- ✓ **Video:** 5.3 P-values, Effect Size and Sample Size Influences
13 min
- ✓ **Reading:** 5.3 P-values, Effect Size and Sample Size Influences
10 min
- ✓ **Video:** 5.4 Testing a Population Mean Claim
11 min
- ✓ **Reading:** 5.4 Testing a Population Mean Claim
10 min
- ✓ **Video:** 5.5 The Central Limit Theorem
11 min
- ✓ **Reading:** 5.5 The Central Limit Theorem
10 min
- ✓ **Video:** 5.6 Proportions: Confidence Intervals and Hypothesis Testing
12 min
- ✓ **Reading:** 5.6 Proportions: Confidence Intervals and Hypothesis Testing
10 min
- ✓ **Video:** Week Five Summary and Key Takeaways
5 min
- ✓ **Quiz:** Week Five Quiz
10 questions



Peer-graded Assignment: Assignment Two: Hypothesis Testing

You passed!

Congratulations. You earned 10 / 10 points. Review the feedback below and continue the course when you are ready. You can also help more peers by reviewing their submissions.

[Review assignments](#)

Instructions

My submission

Hypothesis Test for population mean claim

Discussions

Submitted on May 6, 2021

Shareable Link

PROMPT

You are to test the claim by a mineral water bottle manufacturer that its bottles contain an average of 1000 ml (1 litre). A random sample of $n = 12$ bottles resulted in the measurements (in ml): 992, 1002, 1000, 1001, 998, 999, 1000, 995, 1003, 1001, 997 and 997.

It is assumed that the true variance of water in all bottles is $\sigma^2 = 1.5$, and that the amount of water in bottles is normally distributed.

Test the manufacturer's claim at the 1% significance level (you may use Excel to calculate the p -value). Also, briefly comment on what the hypothesis test result means about the manufacturer's claim, and if an error might have occurred which type of error it would be.

In summary, the assignment requires: