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: