Answer on Question #84609 – Math – Statistics and Probability

Question

We would like to conduct a hypothesis test to determine whether the true mean rent amount for all one-bedroom apartments in Winnipeg differs from $1000. We take a random sample of 50 one-bedroom apartments and calculate the sample mean to be $900. A 98% confidence interval for μ is calculated to be (830, 970). The conclusion for our test would be to:

Question 10 options:

A) fail to reject H0 at the 1% level of significance since the value 900 is contained in the 98% confidence interval.

B) reject H0 at the 2% level of significance since the value 1000 is not contained in the 98% confidence interval.

C) fail to reject H0 at the 2% level of significance since the value 1000 is not contained in the 98% confidence interval.

D) fail to reject H0 at the 2% level of significance since the value 900 is contained in the 98% confidence interval.

E) reject H0 at the 1% level of significance since the value 900 is contained in the 98% confidence interval.

Solution

The conclusion for our test would be as follows.

B) reject H0 at the 2% level of significance since the value 1000 is not contained in the 98% confidence interval.

Answer: B).