

Review Test Submission: Module 03 Week 5 gretl Assignment

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Course	2023GFA_ANA_500_02 Foundations of Data Analytics
Test	Module 03 Week 5 gretl Assignment
Started	9/27/23 8:24 AM
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Due Date	10/1/23 11:59 PM
Status	Completed
Attempt Score	65 out of 100 points
Time Elapsed	36 hours, 56 minutes
Instructions	<p>This process is the same one that we have been using for paper and pencil assignments and for the Midterm Exam. There are a variety of types of questions; multiple choice, true/false, fill in the blank, etc. As usual, select the best choice that answers the question or enter a value you have computed - rounded to two decimal places.</p> <p>If you have questions - ask!!!</p>

Question 1

5 out of 5 points

Of the variables of interest, RM is the **[independent]** variable and CMEDV is the **[dependent]** variable. Enter either independent or dependent in the appropriate blanks.

Question 2

0 out of 5 points

The relationship between the variables CMEDV and RM appears to be linear.

Question 3

0 out of 1 points

What is the mean value of CMEDV?

Question 4

0 out of 1 points

What is the mean value of RM?

Question 5

0 out of 2 points

What is the interquartile range of CMEDV?

Question 6

0 out of 1 points

What is the value of the standard deviation of RM?

Question 7

0 out of 2 points

Calculate the correlation coefficient between the variables of interest, CMEDV and RM. What is the value you calculated for the correlation coefficient?

Question 8

0 out of 3 points

The correlation coefficient is a measure of the strength of the relationship between two variables.

Question 9

5 out of 5 points

Residuals are the difference between the values of independent variables at different points in time.

Question 10

5 out of 5 points

The least squares method of regression to find the line best fitting the data minimizes the (select the best answer below).

Question 11

10 out of 10 points

What are the assumptions required for conducting a linear regression. Select all that apply.

Question 12

0 out of 10 points

Estimate a simple linear regression model using least squares using the OLS command in gretl as shown in your handout. The estimated regression equation is $\hat{Y} = -26 - 8.00x$. True or False?

Question 13

5 out of 5 points

Based on the estimated regression you obtained before, what is the value of the slope coefficient?

Question 14

5 out of 5 points

The estimated slope coefficient tells you how much the dependent variable, in this case home value, varies with changes in the independent variable, in this case the average number of rooms in owner-occupied homes.

Question 15

5 out of 5 points

Is the estimated slope coefficient statistically significant? Enter yes or no [yes].

Question 16

5 out of 5 points

In this case, the P-value equals 4.52e-073 *** or something very, very small and much smaller than the designated 0.05 level of

significance.

Question 17

5 out of 5 points

The coefficient of determination or r-squared, is a measure of how much of the variability in the data is explained by the response, i.e. the dependent variable.

Question 18

10 out of 10 points

The value of r-squared for our current model is?

Question 19

5 out of 5 points

At what point or value is the coefficient of determination or r-squared considered a strong indicator?

The truth is that a good value for r-squared depends on what the model you are developing is intended to do. If the model is intended to represent a lot of engineering or technical applications then usually somewhere between 0.50 and 0.70 is considered good. However, if you are developing a model for a final consumer product where safety is involved you'll want a much higher r-squared, e.g. 0.90 or even a lot higher than that. Most basic R&D projects are good with an r-squared value of around 0.2. In this case, r-squared is only intended to give enough confidence to refine something to the next step or phase which should have a higher r-squared. In the social sciences, r-squared = from 0.10 to 0.30 is often considered good. So, it depends...

Question 20

0 out of 5 points

Calculate a 95% confidence interval for the estimated slope coefficient. What is the value of the lower bound for the 95% confidence interval of the slope coefficient?

Question 21

0 out of 5 points

Calculate a 95% confidence interval for the estimated slope coefficient. What is the value of the upper bound for the 95% confidence interval of the slope coefficient?

Thursday, September 28, 2023 9:20:42 PM EDT

← OK
