PALS0045 Week 4 Quiz

Start Over

This Quiz is designed to test your understanding of the learning objectives from the lecture in Week 4.

Complete each question and press submit to check your answers.

Q1:

If I run a regression analysis with 'number of hours of sleep' as the independent variable and 'number of items correct on a memory test' as the dependent variable. Which of these is it NOT possible to do with our model

- Test whether number of items correct after 0 hours sleep is significantly different to 0 ✗
- Test whether there is a relationship between hours of sleep and score on the memory test. ✗
- Predict a new person's score on the memory test from the number of hours that they slept. ✗
- Test whether having fewer hours of sleep causes poorer performance on the memory test. ✓

Correct!

Q2:

Which component of the GLM equation for the above example would tell us the change in items correct per additional hour of sleep?

- Y_i ✗
- a ✗
- b ✓
- X_i ✗

Correct!

Q3:

Which component of the GLM equation for the above example would tell us the predicted score on the memory test after 0 hours of sleep?

- Y_i ✗
- a ✓
- b ✗

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- X_i ✗

Correct!

Q4:

If a = 10 and b = 3 for the above example, what would the predicted score be for someone who had slept for 6 hours

- 28 ✓
- 16 ✗
- 13 ✗
- 60 ✗

Correct!

Q5:

The t-test for the above model is t = 5.50, p < .001, what is the F test result?

- F = 5.50, p = .01 ✗
- F = 5.50, p < .001 ✗
- F = 25.25, p < .001 ✓
- We can't tell from the information given ✗

Correct!

Q6:

If we wanted to add 'minutes studying' as another predictor, what would be the correct code for the model equation in R?

- hoursleep ~ minstudy * memoryscore ✗
- hoursleep ~ minstudy + memoryscore ✗
- minstudy + hoursleep ~ memoryscore ✗
- memoryscore ~ hoursleep + minstudy ✓

Correct!

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Q7:

In this model a = 10, b1 = 2 and b2 = 4. What would be the predicted score for someone that had slept for 5 hours and studied for 3 minutes?

- 22 ✗
- 36 ✗
- 32 ✓
- 54 ✗

Correct!

Q8:

We have 100 people in our study, what are the degrees of freedom for our model predicting memory score from sleep and study time?

- df model = 2, df error = 98 ✗
- df model = 97, df error = 2 ✗
- df model = 98, df error = 2 ✗
- df model = 2, df error = 97 ✓

Correct!

Q9:

Our sum of squares for the model is 874 and our total sum of squares is 1467. What is the R squared?

- 0.596 ✓
- 1.68 ✗
- 593 ✗
- 2341 ✗

Correct!

Q10:

If you have high collinearity, what should you be concerned about?

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- Model fit ✗
- Predicting new values based on your model ✗
- Interpreting coefficients for variables that are highly correlated ✓
- all of the above ✗

Correct!