Lesson 02 Knowledge Check on Reading/Resources (Quiz)

Due Oct 15 at 6pm **Points** 8 **Questions** 8 **Time Limit** None
Allowed Attempts 2

Instructions

This Quiz tests your comprehension of the reading assignment done BEFORE class. Please take the time to attempt this quiz before class, and complete your second attempt before the due date.

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	22 minutes	5.75 out of 8
LATEST	Attempt 2	22 minutes	5.75 out of 8
	Attempt 1	18,013 minutes	3.75 out of 8

Score for this attempt: **5.75** out of 8
Submitted Oct 14 at 10:50am
This attempt took 22 minutes.

Question 1 — 1 / 1 pts

The assumptions of linear regression are (choose all that apply):

Correct!

- [x] No or little multicollinearity between dependent variables

Correct!

Correct!

- [x] Normal distribution of error terms

Correct!

Correct!

Correct!

- [x] Linear relationship between dependent and independent variable

Correct!

Correct!

- [x] No correlation of error terms

Correct!

- [ ] Normal distribution of input variable

Question 2

1 / 1 pts

How do you determine whether at least one of the predictors is useful in predicting the response?

- [ ] Determine RSE

Correct!

- [x] F-test

Correct!

- [ ] Hypothesis test
- [ ] Gamma-test

Question 3

0 / 1 pts

Which metric is helpful in evaluating the quality of prediction for a particular point?

- R^2
- 'ou Answered RSE

  Incorrect.

  This evaluates quality of fit.
- Confidence interval
- orrect Answer Prediction Interval

Question 4

0.5 / 1 pts

R^2 statistics (choose all that apply):

- 'ou Answered ☑ Can be thought of as 'average deviation' of the model from the actual data point

  Incorrect.
- ☐

In all linear models R2 statistics is the same as Pearson's correlation coefficient squared

- [ ] Accepts values from -1 to 1

Correct!

- [x] Measures the proportion of variability in Y that can be explained using X

Correct!

Correct!

- [x] Has an interpretational advantage over the RSE

Correct!

Question 5

0.75 / 1 pts

Plotting residuals of fitted values allows you to (choose all that apply):

Correct!

- [x] Find outliers

Correct!

- [ ] Find high leverage points

Correct!

- [x] Determine presence of heteroscedasticity

Correct!

Correct!

- [x] Determine non-linearity of the data

Correct!

orrect Answer

- [ ] Determine presence of correlation of error terms

Question 6

1 / 1 pts

Colinearity of dependent variables results in:

- [ ] Lower standard error of coefficients
- [x] Many similar solutions to the linear equation

Correct!

Correct!

- [ ] Better fit of the model to the data
- [ ] Heteroscedasticity

Question 7

0.5 / 1 pts

To determine colinearity of dependent variables (choose all that apply):

Correct!

- [x] Calculate correlation matrix

Correct!

- [ ] Plot residuals of fitted values
- [ ] Look at coefficient standard error

Correct!

- [x] Calculate variance inflation factor

Correct!

ou Answered

- [x] Look at coefficient p-value

Incorrect

Question 8

1 / 1 pts

To handle the data non-linearity (choose all that apply):

Correct!

- [x] Add interaction terms

Correct!

- [ ] Add additional intercept term

Correct!

- [x] Extend the model using polynomial regression

Correct!

- [ ] Discard the model as not reliable
- [ ] Look and remove high leverage points

Quiz Score: **5.75** out of 8