Congratulations! You passed!

Grade received 100% **To pass** 80% or higher

Go to next item

1. How does a data professional determine if a linearity assumption is met? 1 / 1 point

- (•) They confirm whether data on the X-Y coordinate falls along a straight line.
- ( ) They confirm whether data on the X-Y coordinate falls along an upward curved line.
- ( ) They confirm whether data on the X-Y coordinate resembles a random cloud.
- ( ) They confirm whether data on the X-Y coordinate falls along a downward curved line.

Correct
A data professional determines if a linearity assumption is met by confirming whether data on the X-Y coordinate falls along a straight line. A linearity assumption is passed when each predictor variable X is linearly related to the outcome variable Y.

2. Which of the following statements accurately describes the normality assumption? 1 / 1 point

- ( ) The normality assumption can only be confirmed while a model is being built.
- ( ) The normality assumption can be confirmed anytime during model building.
- ( ) The normality assumption can only be confirmed before a model is built.
- (•) The normality assumption can only be confirmed after a model is built.

Correct
The normality assumption can only be confirmed after a model is built. It focuses on the model errors, which can be estimated by the residuals.

3. A data professional uses a scatterplot to plot residuals and predicted values from a regression model to check for homoscedasticity and finds that this assumption is met. What shape do the points in the scatterplot appear as? 1 / 1 point

- ( ) Curved line
- ( ) Cone
- (•) Random cloud
- ( ) Straight line

Correct
The residuals appear as a random cloud of points, which confirms the variation of residuals is consistent or similar across the model and satisfies the assumption of homoscedasticity.

4. What type of visualization uses a series of scatterplots that show the relationships between pairs of variables? 1 / 1 point

- ( ) Residual matrix
- ( ) Scatterplot residuals
- ( ) Linear matrix
- (•) Scatterplot matrix

Correct
A scatterplot matrix uses a series of scatterplots that show the relationships between pairs of variables. This helps data professionals assess whether there is a linear relationship between the independent and dependent variables.