Try again once you are ready
Grade received 75%
To pass 80% or higher
 Try again

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?   0 / 1 point

    ◯ The normality assumption can only be confirmed after a model is built.

    ◯ The normality assumption can only be confirmed before a model is built.

    ◯ The normality assumption can only be confirmed while a model is being built.

    ⦿ The normality assumption can be confirmed anytime during model building.

    ⊗ Incorrect
    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 is using a scatterplot to plot residuals and predicted values from a regression model to check for homoscedasticity. What does this scenario represent?   1 / 1 point

    ◯ Straight line

    ◯ Cone

    ⦿ Random cloud

    ◯ Curved line

    ⊘ Correct
    This scenario represents a random cloud. Random clouds are used to validate the homoscedasticity assumption. They confirm the variation of residuals is consistent or similar across the model.

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

○ Linear matrix

○ Scatterplot residuals

◉ Scatterplot matrix

○ Residual 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.