

Guideline Quizzes for Module 10

Question 1

1 point

Which of the following best describes a 'factor' in the context of regression analysis?

Choose at least one correct answer

☐ (A) quantitative explanatory variable

☒ (B) A qualitative (categorical) explanatory variable

Correct answer

☐ (C) The response variable

☐ (D) The error term

Question 2

1 point

The primary motivations for including a factor in a regression model are

Choose at least one correct answer

☐ (A) To increase the complexity of the model

☐ (B) To make the model easier to interpret

☒ (C) To account more fully for the response variable and avoid biased assessment of other explanatory variables

Correct answer

☐ (D) To reduce the number of explanatory variables

Question 3

1 point

If the relationship between an explanatory variable and the response variable changes depending on the value of another explanatory variable, this suggests

Choose at least one correct answer

☐ (A) An additive relationship

☒ B. An interaction effect

Correct answer

☐ C. A simple linear relationship

☐ D. A non-linear relationship

Question 4

1 point

Which of the following is NOT an assumption of the regression model discussed in the context of dummy variable regression?

Choose at least one correct answer

☐ A. The errors are normally distributed

☒ B. The errors have a non-constant variance

Correct answer

☐ C. The errors are independent

☐ D. The errors have zero means

Question 5

1 point

In a regression model with a dummy variable representing gender (male = 0, female = 1), what does the coefficient of the dummy variable represent?

Choose at least one correct answer

☒ A. The difference in average income between males and females, holding other variables constant

Correct answer

☐ B. The average income for females

☐ C. The ratio of average income between males and females

☐ D. The average income for males