Quiz 3 Questions

1. Suppose the predictor variables in a multiple linear regression model are centered on their mean. Which of the following elements of the model will change after centering?

a. RSS

b. interpretation of β1

c. interpretation of β0

2. In the following multiple linear regression model, the best interpretation of β1 is “the average change in Y given a 1-unit increase in X1”. Yi = β0 + β1Xi + β2X2 + εi

a. TRUE

b. FALSE

3. The assumptions that the residuals have mean zero, constant variance and are independent are the same in both MLR and SLR.

a. TRUE

b. FALSE

4. According to the article from *Nature*, which of the following is a correct interpretation of a p-value?

a. The probability that your result is a false alarm.

b. The probability of observing something as or more extreme as what you observed, assuming the null hypothesis is true.

c. The probability that your result is a false alarm depends on the underlying probability that your initial hypothesis is true.