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Understanding Least Squares Estimation - Quiz

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Question 1

1/1 point (graded)

Match each of these definitions with the correct terms:

a. $\hat{\beta}_0 + \hat{\beta}_1 X$

Regression line (fitted line) ▼

✓ Answer: Regression line (fitted line)

b. $\hat{\beta}_0 + \hat{\beta}_1 X_i$

Fitted value \hat{Y}_i ▼✓ Answer: Fitted value \hat{Y}_i

c. $Y_i - \hat{Y}_i$

Residual (ϵ^\wedge) ▼✓ Answer: Residual ($\hat{\epsilon}$)

Explanation

The residual ($\hat{\epsilon}$) is the deviation from an ordered pair (x, y) and the fitted regression line. The regression line is also known as the fitted line and is defined above as (b). The fitted value (\hat{Y}_i) is the value of Y associated with a particular value X_i on the regression line.

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The Linear Model

due Nov 28, 2016 05:00 IST



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You have used 1 of 2 attempts

✓ Correct (1/1 point)

Question 2

1/1 point (graded)

True or False: $E[\hat{\beta}_0] = \beta_0$

☒ a. True ✓

☐ b. False

Explanation

As mentioned during our discussion of least squares estimators, one of the favourable properties of OLS is that the estimators are unbiased. This means that $E[\hat{\beta}_0] = \beta_0$ and $E[\hat{\beta}_1] = \beta_1$.

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The Multivariate Linear Model

due Nov 28, 2016 05:00 IST

**Module 9: Homework**

due Nov 21, 2016 05:00 IST



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