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Quick Question

Quick Question

0/3 points (graded)
Suppose the coefficients of a logistic regression model with two independent variables are as follows:

$$\beta_0 = -1.5, \quad \beta_1 = 3, \quad \beta_2 = -0.5$$

And we have an observation with the following values for the independent variables:

$$x_1 = 1, \quad x_2 = 5$$

What is the value of the Logit for this observation? Recall that the Logit is log(Odds).

0 ✖ **Answer:** -1

0

Explanation
The Logit is just log(Odds), and looks like the linear regression equation. So the Logit is -1.5 + 3*1 - 0.5*5 = -1.

What is the value of the Odds for this observation? Note that you can compute e^x, for some number x, in your R console by typing exp(x). The function exp() computes the exponential of its argument.

exp(8)

✖ **Answer:** 0.3678794

$$\exp(8)$$

Explanation

Using the value of the Logit from the previous question, we have that Odds = e^(-1) = 0.3678794.

What is the value of P(y = 1) for this observation?

0.4

✖ **Answer:** 0.2689414

$$0.4$$

Explanation

Using the Logistic Response Function, we can compute that P(y = 1) = 1/(1 + e^(-Logit)) = 1/(1 + e^(1)) = 0.2689414.

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You have used 5 of 5 attempts

Answers are displayed within the problem