Question 3

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We have bivariate data on a group of college students: the total amount (in dollars) spent on textbooks throughout their college career, and their GPA. The following linear regression model was used to predict GPA from number of dollars (in hundreds) spent:

Predicted GPA = 2.84 + .04*Dollars

problem

1/1 point (graded)

3a. What is the predicted GPA of a student who spent a total of $970 on textbooks in college? *(Round to 2 decimal places.)*

3.23 ✔

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problem

1/1 point (graded)

3b. If a student spent $0 on textbooks in college and graduated with a GPA of 3.71, what is her residual? *(Round to 2 decimal places.)*

0.87 ✔

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problem

1/1 point (graded)

3c. If a student spent $1,450 on textbooks and graduated with a GPA of 2.91, what is his residual? *(Please indicate whether the residual is positive or negative in your response, and **round to 2 decimal places**.)*

-0.51 ✔

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problem

0 points possible (ungraded)

This question is worth zero points. It does not count towards your grade.

3d. A freshman learned of this study and calculated that she would need to spend $2,900 on textbooks to earn a 4.0 GPA. (You can confirm this calculation using the equation above). She decided to buy all of her textbooks new (rather than second-hand and cheaper) to help boost her GPA. Is she using the model in a statistically-sound way?

- ○ Yes
- ◉ No ✔

Submit You have used 1 of 1 attempt