Quick Question

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0/1 point (graded)

Suppose we add another variable, Average Winter Temperature, to our model to predict wine price. Is it possible for the model's R^2 value to go down from 0.83 to 0.80?

- No, the model's R^2 value can only decrease to 0.81 by adding new variables.
- No, the model's R^2 value can not decrease at all by adding new variables. ✔
- Yes, the R^2 value could decrease to 0.80. ✖

Explanation

The model's R^2 value can never decrease from adding new variables to the model. This is due to the fact that it is always possible to set the coefficient for the new variable to zero in the new model. However, this would be the same as the old model. So the only reason to make the coefficient non-zero is if it improves the R^2 value of the model, since linear regression picks the coefficients to minimize the error terms, which is the same as maximizing the R^2.

Submit You have used 1 of 1 attempt

Answers are displayed within the problem