

Concept Check #7

HST 190: Introduction to Biostatistics

- The project is out-of-sync -- use ``renv::status()`` for details.

This worksheet is open-note. Take 15 minutes to consider the following questions. We will discuss as a group.

1. Suppose a numerical random variable X_1 has a coefficient $\beta_1 = 2.5$ in a multiple regression model. Suppose also that the first observation has $x_1^{i=1} = 7.2$, the second observation has a value of $x_1^{i=2} = 8.2$, and these two observations have the same values for all other predictors. True or False: The predicted value of the second observation will be 2.5 units higher than the prediction of the first observation based on the multiple regression model.
2. True or False: If a regression model's first variable X_1 has a coefficient of $\beta_1 = 2.5$, then if we are able to influence the data so that an observation i will have its realization of x_1^i be 1 larger than it would otherwise, the value y_1^i for this observation would increase by 2.5 units.