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Week 10 Reading Questions

Q1

I believe that when multiple parameters are included in a model, it raises the possibility of having confounding variables. Therefore, we cannot be sure which parameters contribute most to the goodness of fit for the model

Q2

In the regression equation for a simple linear regression, the variable beta multiplies the predictor variable x. Alpha is considered a constant value and epsilon represents a margin of error in the data. When beta is multiplied by x, it acts as a rate of change. Depending on how large beta is and whether it is positive or negative, multiplying it by x will either increase or decrease the response variable y.

To understand the simple linear regression equation, we can think of how a worker’s salary changes based on the number of years they have worked in a company. We can assume that as the number of years that a worker spends at this company, their salary will gradually increase over time.

Q3

A “base case” is the intercept in a 1-way ANOVA. I believe this also represents the Low water treatment

Q4

The average plant mass for the low water treatment is equal to the intercept of the coefficient table, 2.4 g

Q5

The average plan mass for the medium water treatment is equivalent to adding the waterMed estimate to the intercept

2.4 g + 1.3 = 3.7

Q6

I believe all questions can be answered by the coefficient table.