3.R Review Questions

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3.R.R1

1/1 point (graded)

What is the difference between lm(y ~ x*z) and lm(y ~ I(x*z)), when x and z are both numeric variables?

- ⦿ The first one includes an interaction term between x and z, whereas the second uses the product of x and z as a predictor in the model. ✔

- ⦾ The second one includes an interaction term between x and z, whereas the first uses the product of x and z as a predictor in the model.

- ⦾ The first includes only an interaction term for x and z, while the second includes both interaction effects and main effects.

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Explanation

An interaction term between a numeric x and z is just the product of x and z. The difference is that in the first model, lm processes the "*" operator between variables and automatically includes main effects, whereas in the latter model, the expression inside the I() function is not parsed as a part of the formula, but rather is simply evaluated.