

✓ **Congratulations! You passed!**

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1. A data team with a restaurant group uses a regression technique to learn about customer loyalty and ratings. They estimate the linear relationship between one continuous dependent variable and two independent variables. What technique are they using?

1 / 1 point

- ☐ Coefficient regression
- ☐ Simple linear regression
- ☐ Interaction regression
- ☒ Multiple linear regression

✓ Correct

2. Which of the following are examples of categorical variables? Select all that apply.

1 / 1 point

- ☒ Shirt size
- ☒ Shirt type
- ☐ Shirt inventory
- ☒ Shirt country of manufacture

✓ Correct

✓ Correct

✓ Correct

3. Fill in the blank: The no multicollinearity assumption states that no two \_\_\_\_\_ variables can be highly correlated with each other.

1 / 1 point

- ☐ categorical
- ☐ dependent
- ☐ continuous
- ☒ independent

✓ Correct

4. What term represents how the relationship between two independent variables is associated with changes in the mean of the dependent variable?

1 / 1 point

- ☒ Interaction term
- ☐ Coefficient term
- ☐ Selection term
- ☐ Normality term

✓ Correct

5. Which regression evaluation metric penalizes unnecessary explanatory variables?

1 / 1 point

- ☐ Holdout sampling
- ☐ Overfitting
- ☒ Adjusted R squared
- ☐ Regression sampling

✓ Correct

6. Which of the following statements accurately describe forward selection and backward elimination? Select all

1 / 1 point

that apply.

☒ Backward elimination begins with the full model with all possible independent variables.

✓ Correct

☐ Forward selection begins with the full model with all possible independent variables.

☒ Forward selection begins with the full model and zero independent variables.

✓ Correct

☐ Forward selection begins with the full model with all possible dependent variables.

7. A data professional reviews model predictions for a project involving financial data. During the review, they notice a model that oversimplifies the relationship and underfits the observed data. This generates inaccurate estimates for the company's annual budget. What quality does this model have?

1 / 1 point

☐ Selection

☒ Bias

☐ Elimination

☐ Variance

✓ Correct

8. What regularization technique completely removes variables that are less important to predicting the y variable of interest?

1 / 1 point

☐ Independent regression

☐ Ridge regression

☒ Lasso regression

☐ Elastic net regression

✓ Correct