Try again once you are ready

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Try again

1. A data team working for an online magazine uses a regression technique to learn about advertising sales in different sections of the publication. They estimate the linear relationship between one continuous dependent variable and four 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. **0.5 / 1 point**

- ☐ Shirt size
- ☑ Shirt inventory

This should not be selected
Review the video about categorical variables.

- ☑ Shirt type

Correct

- ☑ Shirt country of manufacture

Correct

3. A data professional confirms that no two independent variables are highly correlated with each other. Which assumption are they testing for? **1 / 1 point**

- ○ No linearity assumption
- ◉ No multicollinearity assumption
- ○ No normality assumption
- ○ No homoscedasticity assumption

Correct

4. Fill in the blank: An interaction term represents how the relationship between two independent variables is associated with changes in the _____ of the dependent variable. **0 / 1 point**

- ○ mean
- ◉ multicollinearity
- ○ assumption
- ○ category

Incorrect
Review the video about interpretation of multiple regression coefficients.

5. A data professional uses an evaluation metric that penalizes unnecessary explanatory variables. Which metric are they using? **1 / 1 point**

- ◉ Adjusted R squared
- ○ Ordinary least squares
- ○ Holdout sampling
- ○ Link function

Correct

6. What stepwise variable selection process begins with the null model and zero independent variables? **1 / 1 point**

- (●) Forward selection
- ( ) Holdout elimination
- ( ) Extra-sum-of-squares F-test
- ( ) Backward elimination

✓ **Correct**

7. A data professional reviews model predictions for a human resources project. They discover a model that makes assumptions about variable relationships, which results in underfitting the observed data. This leads to inaccurate estimates about employee retention. What quality does this model have? **1 / 1 point**

- (●) Bias
- ( ) Errors
- ( ) Interaction
- ( ) Variance

✓ **Correct**

8. What regularization technique completely removes variables that are less important to predicting the y variable of interest? **0 / 1 point**

- ( ) Lasso regression
- ( ) Independent regression
- (●) Ridge regression
- ( ) Elastic net regression

✗ **Incorrect**
Review the video about regularization.