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1. A data professional at a car rental agency uses a regression technique to learn about how customers engage with various sections of the company website. They estimate the linear relationship between one continuous dependent variable and three independent variables. What technique are they using? 1 / 1 point

- One hot encoding
- Interaction terms
- (•) Multiple linear regression
- Simple linear regression

Correct

2. Which of the following are examples of categorical variables? Select all that apply. 1 / 1 point

- [x] Shirt country of manufacture

Correct

- [ ] Shirt inventory
- [x] Shirt size

Correct

- [x] Shirt type

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

- (•) independent
- continuous
- categorical
- dependent

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

- Normality term
- Coefficient term
- (•) Interaction term
- Selection term

Correct

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

- Link function
- (•) Adjusted R squared
- Ordinary least squares
- Holdout sampling

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 that the model performs poorly on both the training data and the test holdout data, consistently predicting figures that are too low. This leads to inaccurate estimates about employee retention. What quality does this model have too much of? 1 / 1 point

- (•) Bias
- Entropy
- Leakage
- Variance

Correct

8. What regularization technique is recommended when working with large datasets and when there is uncertainty as to whether variables should drop out of the model? 1 / 1 point

- (•) Elastic net regression
- Ridge regression
- Lasso regression
- Backward regression

Correct