

1.

Which of the following statements about model complexity is TRUE?

1 / 1 point

☐

Higher model complexity leads to a lower chance of overfitting.

☒

Higher model complexity leads to a higher chance of overfitting.

☐

Reducing the number of features while adding feature interactions leads to a lower chance of overfitting.
- ☐
- Reducing the number of features while adding feature interactions leads to a higher chance of overfitting.

✔ Correct

Correct! You can find more information in the Bias Trade Off lesson.

2.

Which of the following statements about model errors is TRUE?

1 / 1 point

☐

Underfitting is characterized by lower errors in both training and test samples.

☒

Underfitting is characterized by higher errors in both training and test samples.

☐

Underfitting is characterized by higher errors in training samples and lower errors in test samples.☐

✔ Correct

Correct! You can find more information in the Bias Trade Off lesson.

3.

Which of the following statements about regularization is TRUE?

1 / 1 point

☐

Regularization always reduces the number of selected features.

☐

Regularization increases the likelihood of overfitting relative to training data.

☒

Regularization decreases the likelihood of overfitting relative to training data.☐

✔ Correct

Correct! You can find more information in the Regularization Techniques lesson.

4.

Which of the following statements about scaling features prior to regularization is TRUE?

1 / 1 point

☐

Feature scaling is not recommended prior to regularization.

☐

Features should rarely or never be scaled prior to implementing regularization.

☒

The larger a feature's scale, the more likely its estimated impact will be influenced by regularization.☐

✔ Correct

Correct! You can find more information in the Regularization Techniques lesson.

5.

Which one of the 3 Regularization techniques: Ridge, Lasso, and Elastic Net, performs the fastest under the hood?

1 / 1 point

☒

Ridge

☐

Lasso

☐

Elastic Net☐

✔ Correct

Correct. You can find more information in the Polynomial Features and Regularization Demo.

6.

Which of the following statements about Elastic Net regression is TRUE?

1 / 1 point

☒

Elastic Net combines L1 and L2 regularization.

☐

Elastic Net does not use L1 or L2 regularization.

☐

Elastic Net uses L2 regularization, as with Ridge regression.☐

✔ Correct

Correct! You can find more information in the Regularization Techniques lesson.

7.

BOTH Ridge regression and Lasso regression

1 / 1 point

☐

Do not adjust the cost function used to estimate a model.

☒

Add a term to the loss function proportional to a regularization parameter.

☐

Add a term to the loss function proportional to the square of parameter coefficients.☐

✔ Correct

Correct! You can find more information in the Regularization Techniques lessons.

8.

Compared with Lasso regression (assuming similar implementation), Ridge regression is:

1 / 1 point

☐

Less likely to overfit to training data.

☐

More likely to overfit to training data.

☒

Less likely to set feature coefficients to zero.☐

✔ Correct

Correct! You can find more information in the Regularization Techniques lessons.

9.

Which of the following about Ridge Regularization is TRUE?

1 / 1 point

☐

It enforces the coefficients to be lower, but not 0

☐

It minimizes irrelevant features

☐

It penalizes the size magnitude of the regression coefficients by adding a squared term☒

✔ Correct

Correct! Incorrect! For more information review the Ridge Regression lesson.

10.

Whixh of the below statements are correct?

1 / 1 point

☐

Neither RidgeCV nor LassoCV use L1 regularization function.

☐

Both RidgeCV and LassoCV use L1 regularization function.

☐

Only RidgeCV use L1 regularization function.☒

✔ Correct

Correct! You can find more information in the Polynomial Features and Regularization Demo.