1. What is the result of the following code?   `1 point`

```
cross_val_predict (lr2e, x_data, y_data, cv=3)
```

○ Performs multiple out-of-sample evaluations

○ The average R^2 on the test data for each of the two folds

○ Calculates the free parameter alpha

◉ The predicted values of the test data using cross-validation

2. How would you organize the values 1, 10, and 100 as possible values of alpha for Grid Search?   `1 point`

◉ `parameter = [{'alpha': [1,10,100]}]`

○ `parameter=[1,10,100]`

○ `parameter = Ridge(alpha=[1,10,100])`

○ `parameter = alpha(1,10,100)`

3. You do the following steps with a data set:

1. Divide a data set into testing and training sets.

2. Create a linear model with the training set.

3. Find the average R^2 value on your training data. It is found to be 0.5.

4. Perform a 100th-order polynomial transform on your data.

5. Use these transformed values to train another model.

6. Find the new value for R^2. It is found to be 0.99.

Which of the following statements is correct?

○ 100-th order polynomial will work better on the rest of your data

○ Create another linear model with all of the data and compare results

○ You should use the simpler model

◉ You should use your test data to test the model further

4. What is the purpose of "folding" your data sets?

○ To find the actual predicted values of the model before calculating R^2

◉ Folds are used for cross-validation

○ To find R^2 values on a training set and a test set of data

○ Folding is used primarily for polynomial transformations

5. In the following image, the blue curve represents a model, the blue dots represent the data, and the orange curve represents the true function. Which of the following is true about the model?
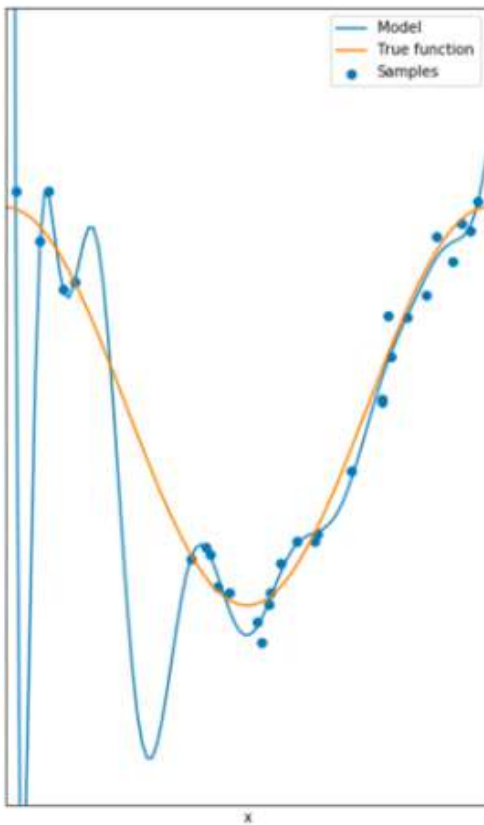
○ No conclusions can be drawn about the model

○ It displays underfitting

○ The model is a good fit

◉ It displays overfitting