Congratulations! You passed!
Grade received 100% **To pass** 66% or higher

1. Which of the following is the meaning of "Out of Sample Accuracy" in the context of evaluation of models?

"Out of Sample Accuracy" is the percentage of correct predictions that the model makes using the test dataset.

"Out of Sample Accuracy" is the accuracy of a model on all the data available.

"Out of Sample Accuracy" is the percentage of correct predictions that the model makes on data that the model has NOT been trained on.

"Out of Sample Accuracy" is the accuracy of an overly trained model (which may capture noise and produced a non-generalized model)

Correct
Correct! Out-of-sample accuracy represents how well the model is able to perform on unknown data.

2. When should we use Multiple Linear Regression? (Select two)

When there are multiple dependent variables

When we would like to identify the strength of the effect that the independent variables have on a dependent variable.

Correct
Correct! Multiple linear regression is used for regression tasks involving more than one independent variable.

When we would like to examine the relationship between multiple variables.

When we would like to predict impacts of changes in independent variables on a dependent variable.

Correct
Correct! We hope to understand how the dependent variable change when we change the independent variables.

3. Which sentence is TRUE about linear regression?

A linear relationship is necessary between the independent variables and the dependent variable.

Multiple linear regression requires a linear relationship between the predictors and the response, but simple linear regression does not.

Simple linear regression requires a linear relationship between the predictor and the response, but multiple linear regression does not.

A linear relationship is necessary between the independent and dependent variables as well as in between independent variables.

Correct
Correct! If the relationship is non-linear, then we must use non-linear regression.