### Example assessment questions for the machine learning paradigm

Question

Regression outputs a set of probabilities that predict the likelihood that the inputs belong to each possible class or label.

1. True
2. **False**

Explanation: Regression predicts a value (or set of values) given a set of inputs. Classification predicts a set of probabilities that predict the likelihood of the inputs belonging to each possible label.

Question

Neural networks must have one input and one output

1. True
2. **False**

Explanation: Neural networks can have any number of input and output values.

Question

When should you stop training a model?

1. For as long as possible
2. For a particular number of epochs
3. Until the training error steps getting smaller
4. **Until the validation error stops getting smaller**

Question

The test data set is used to evaluate the model after each epoch.

1. True
2. **False**

Explanation: you generally want to use the validation set to evaluate the model after each epoch and reserve the test set to evaluate the model after it is done training.

Question

An overfit model will perform poorly on which of the following? Select all that apply.

1. Training data
2. **Validation data**
3. **Test data**
4. **Data encountered in the real world after deployment**

Question

Inference is when a model is used to make a prediction with some given input data.

1. **True**
2. False