✓ **Congratulations! You passed!**

| Grade received 100% | Latest Submission Grade 100% | To pass 80% or higher | **Go to next item** |

1.

1 / 1 point

In the context of machine learning, what is a diagnostic?

○ An application of machine learning to medical applications, with the goal of diagnosing patients' conditions.

◉ A test that you run to gain insight into what is/isn't working with a learning algorithm.

○ This refers to the process of measuring how well a learning algorithm does on a test set (data that the algorithm was not trained on).

○ A process by which we quickly try as many different ways to improve an algorithm as possible, so as to see what works.

✓ **Correct**
Yes! A diagnostic is a test that you run to gain insight into what is/isn't working with a learning algorithm, to gain guidance into improving its performance.

2.

1 / 1 point

True/False? It is always true that the better an algorithm does on the training set, the better it will do on generalizing to new data.
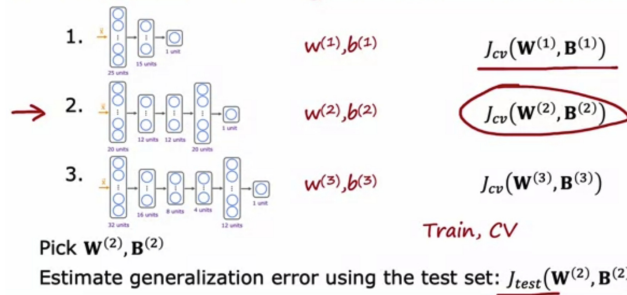
◉ False

○ True

✓ **Correct**
Actually, if a model overfits the training set, it may not generalize well to new data.

3.

1 / 1 point

For a classification task; suppose you train three different models using three different neural network architectures. Which data do you use to evaluate the three models in order to choose the best one?

○ The training set

○ The test set

○ All the data -- training, cross validation and test sets put together.

◉ The cross validation set

✓ **Correct**
Correct. Use the cross validation set to calculate the cross validation error on all three models in order to compare which of the three models is best.