

# SupervisedMachineLearning-WEEK-2-QUIZ-2

Link: [SupervisedMachineLearning-WEEK-2-QUIZ-2](#)

Your grade: 100%

Your latest: 100% • Your highest: 100% • To pass you need at least 70%. We keep your highest score.

Next item →



1 / 1 point

1. Which of the following is a valid step used during feature scaling?

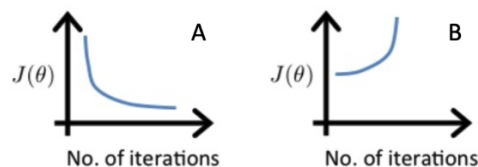
- ☐ Add the mean (average) from each value and then divide by the (max - min).
- ☒ Subtract the mean (average) from each value and then divide by the (max - min).

✓ Correct

This is called mean normalization.

2. Suppose a friend ran gradient descent three separate times with three choices of the learning rate  $\alpha$  and plotted the learning curves for each (cost  $J$  for each iteration).

1 / 1 point



For which case, A or B, was the learning rate  $\alpha$  likely too large?

- ☒ case B only
- ☐ case A only
- ☐ Both Cases A and B
- ☐ Neither Case A nor B

✓ Correct

The cost is increasing as training continues, which likely indicates that the learning rate  $\alpha$  is too large.

3. Of the circumstances below, for which one is feature scaling particularly helpful?

1 / 1 point

- ☒ Feature scaling is helpful when one feature is much larger (or smaller) than another feature.
- ☐ Feature scaling is helpful when all the features in the original data (before scaling is applied) range from 0 to 1.

✓ **Correct**

For example, the “house size” in square feet may be as high as 2,000, which is much larger than the feature “number of bedrooms” having a value between 1 and 5 for most houses in the modern era.

4. You are helping a grocery store predict its revenue, and have data on its items sold per week, and price per item. What could be a useful engineered feature?

1 / 1 point

- ☐ For each product, calculate the number of items sold divided by the price per item.
- ☒ For each product, calculate the number of items sold times price per item.

✓ **Correct**

This feature can be interpreted as the revenue generated for each product.

5. True/False? With polynomial regression, the predicted values  $f_w, b(x)$  does not necessarily have to be a straight line (or linear) function of the input feature  $x$ .

1 / 1 point

- ☐ False
- ☒ True

✓ **Correct**

A polynomial function can be non-linear. This can potentially help the model to fit the training data better.