Your grade: 100%

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

Next item →

You increased your skill score!

Supervised Learning Your score: **9** (↑7) Conversant

Keep going! At a conversant level, you have familiarity with the vocabulary and are able to pass easy content.

1 / 1 point

1. Gradient descent is an algorithm for finding values of parameters w and b that minimize the cost function J.

repeat until convergence {

$$w = w - \alpha \frac{\partial}{\partial w} J(w,b)$$

$$b = b - \alpha \frac{\partial}{\partial b} J(w,b)$$

When $\frac{\partial J(w,b)}{\partial w}$ is a negative number (less than zero), what happens to w after one update step?

- ○ It is not possible to tell if w will increase or decrease.
- ○ w stays the same
- ○ w decreases
- ◉ w increases.

Correct
The learning rate is always a positive number, so if you take W minus a negative number, you end up with a new value for W that is larger (more positive).

1 / 1 point

2. For linear regression, what is the update step for parameter b?

- ◉ $b = b - \alpha \frac{1}{m} \sum_{i=1}^{m} (f_{w,b}(x^{(i)}) - y^{(i)})$
- ○ $b = b - \alpha \frac{1}{m} \sum_{i=1}^{m} (f_{w,b}(x^{(i)}) - y^{(i)}) x^{(i)}$

Correct
The update step is $b = b - \alpha \frac{\partial J(w,b)}{\partial w}$ where $\frac{\partial J(w,b)}{\partial b}$ can be computed with this expression: $\sum_{i=1}^{m} (f_{w,b}(x^{(i)}) - y^{(i)})$