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Congratulations! You passed!
Grade received 100%
Latest Submission Grade 100%
To pass 70% or higher

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

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?

- (●) w increases.
- ( ) w stays the same
- ( ) w decreases
- ( ) It is not possible to tell if w will increase or decrease.

✓ 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).

2. For linear regression, what is the update step for parameter b? 1 / 1 point

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

✓ 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: $\sum_{i=1}^{m} (f_{w,b}(x^{(i)}) - y^{(i)})$