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## Practice quiz: Gradient descent for logistic regression

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1.

1 / 1 point

### Gradient descent for logistic regression

repeat {

$$w_j = w_j - \alpha \left[ \frac{1}{m} \sum_{i=1}^m (f_{\vec{w},b}(\vec{x}^{(i)}) - y^{(i)}) x_j^{(i)} \right]$$

$$b = b - \alpha \left[ \frac{1}{m} \sum_{i=1}^m (f_{\vec{w},b}(\vec{x}^{(i)}) - y^{(i)}) \right]$$

} simultaneous updates

$$f_{\vec{w},b}(\vec{x}) = \frac{1}{1 + e^{-(\vec{w} \cdot \vec{x} + b)}}$$

Which of the following two statements is a more accurate statement about gradient descent for logistic regression?

- ☒ The update steps look like the update steps for linear regression, but the definition of  $f_{w,b}(\mathbf{x}^{(i)})$  is different.
- ☐ The update steps are identical to the update steps for linear regression.

☒ **Correct**

For logistic regression,  $f_{w,b}(\mathbf{x}^{(i)})$  is the sigmoid function instead of a straight line.