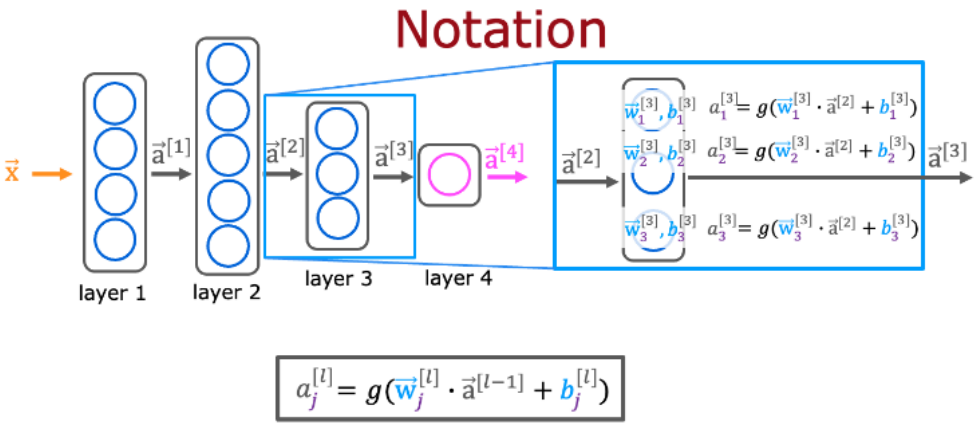
Congratulations! You passed!

Grade received 100% **Latest Submission Grade** 100% **To pass** 80% or higher

Go to next item

1. 1 / 1 point



$$a_j^{[l]} = g(\vec{w}_j^{[l]} \cdot \vec{a}^{[l-1]} + b_j^{[l]})$$

For a neural network, what is the expression for calculating the activation of the third neuron in layer 2? Note, this is different from the question that you saw in the lecture video.

- $a_3^{[2]} = g(\vec{w}_3^{[2]} \cdot \vec{a}^{[2]} + b_3^{[2]})$
- $a_3^{[2]} = g(\vec{w}_2^{[3]} \cdot \vec{a}^{[1]} + b_2^{[3]})$
- $a_3^{[2]} = g(\vec{w}_2^{[3]} \cdot \vec{a}^{[2]} + b_2^{[3]})$
- ◉ $a_3^{[2]} = g(\vec{w}_3^{[2]} \cdot \vec{a}^{[1]} + b_3^{[2]})$

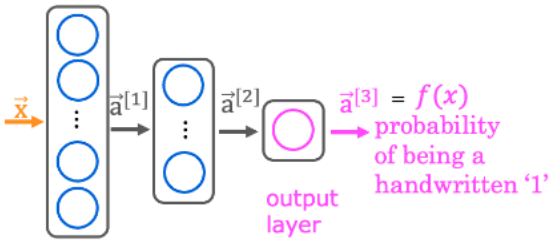
Correct

Yes! The superscript [2] refers to layer 2. The subscript 3 refers to the neuron in that layer. The input to layer 2 is

2.

Handwritten digit recognition

1 / 1 point



$$\vec{a}^{[3]} = \left[g\left(\vec{w}_1^{[3]} \cdot \vec{a}^{[2]} + b_1^{[3]} \right) \right]$$

$$is\ a_1^{[3]} \geq 0.5?$$

yes → $\hat{y} = 1$ image is digit 1

no → $\hat{y} = 0$ image isn't digit 1

For the handwriting recognition task discussed in lecture, what is the output $a_1^{[3]}$?

- ○ A number that is either exactly 0 or 1, comprising the network's prediction
- ○ A vector of several numbers, each of which is either exactly 0 or 1
- ◉ The estimated probability that the input image is of a number 1, a number that ranges from 0 to 1.
- ○ A vector of several numbers that take values between 0 and 1

✓ Correct
Yes! The neural network outputs a single number between 0 and 1.