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1. What is the "cache" used for in our implementation of forward propagation and backward propagation? **1 / 1 point**

Expand

Correct
Correct, the "cache" records values from the forward propagation units and are used in backward propagation units because it is needed to compute the chain rule derivatives.

2. Which of the following are “parameters” of a neural network? (Check all that apply.) **1 / 1 point**

Expand

Correct
Great, you got all the right answers.

3. Considering the intermediate results below, which layers of a deep neural network are they likely to belong to? **1 / 1 point**

Expand

Correct

Correct. The deep layers of a neural network are typically computing more complex features such as the ones shown in the figure.

4. We can not use vectorization to calculate $da^{[l]}$ in backpropagation, we must use a for loop over all the examples. True/False? **1 / 1 point**

↙↗ **Expand**

✓ **Correct**
Correct. We can use vectorization in backpropagation to calculate $dA^{[l]}$ for each layer. This computation is done over all the training examples.

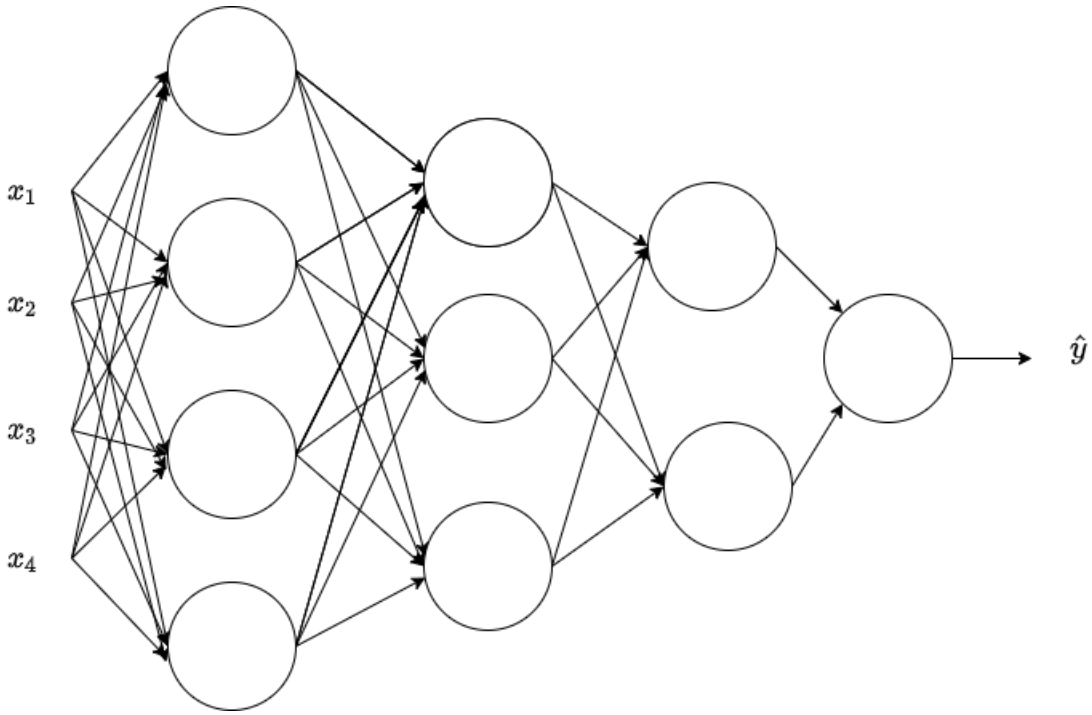
5. Suppose W[i] is the array with the weights of the i-th layer, b[i] is the vector of biases of the i-th layer, and g is the activation function used in all layers. Which of the following calculates the forward propagation for the neural network with L layers. **0 / 1 point**

Expand

Incorrect

No. Remember that the range omits the last number thus the range from 1 to L calculates only the A up to the L-1 layer.

6. Consider the following neural network: **1 / 1 point**



What are all the values of $n^{[0]}, n^{[1]}, n^{[2]}, n^{[3]}$ and $n^{[4]}$?

Expand

Correct
Yes. The $n^{[l]}$ are the number of units in each layer, notice that $n^{[0]} = n_x$.

7. If L is the number of layers of a neural network then $dZ^{[L]} = A^{[L]} - Y$. True/False? **1 / 1 point**

Expand

Correct

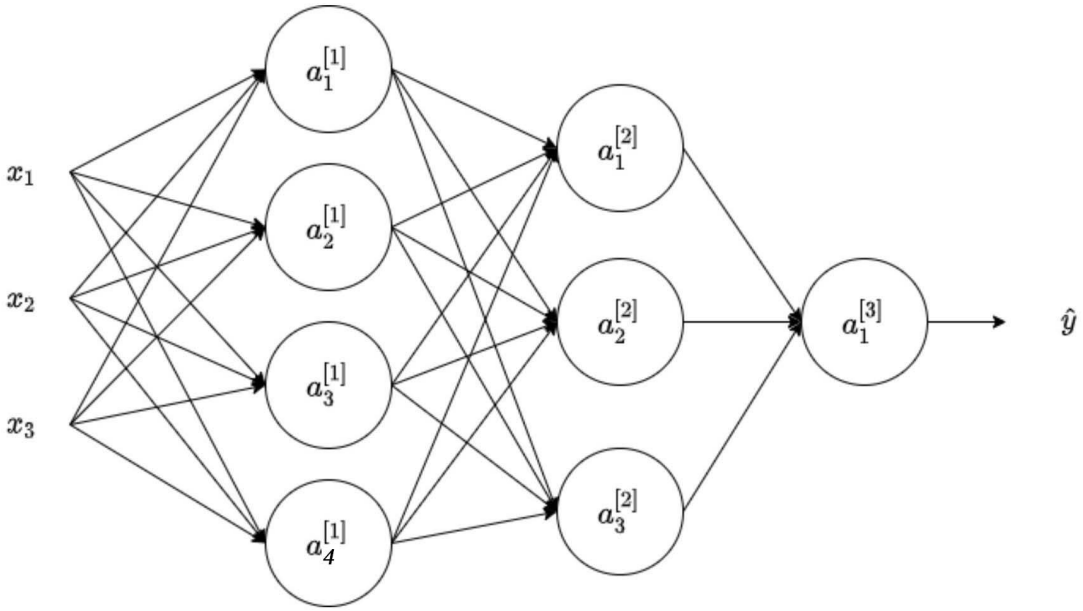
8. For any mathematical function you can compute with an L-layered deep neural network with N hidden units there is a shallow neural network that requires only $\log N$ units, but it is very difficult to train. **1 / 1 point**

Expand

Correct

Correct. On the contrary, some mathematical functions can be computed using an L-layered neural network and a given number of hidden units; but using a shallow neural network the number of necessary hidden units grows exponentially.

9. Consider the following 2 hidden layers neural network: **1 / 1 point**



Which of the following statements is true? (Check all that apply).

Expand

Correct

Great, you got all the right answers.

10. Whereas the previous question used a specific network, in the general case what is the dimension of W^{[l]}, the weight matrix associated with layer l? **1 / 1 point**

Expand

Correct
True