grade 100%

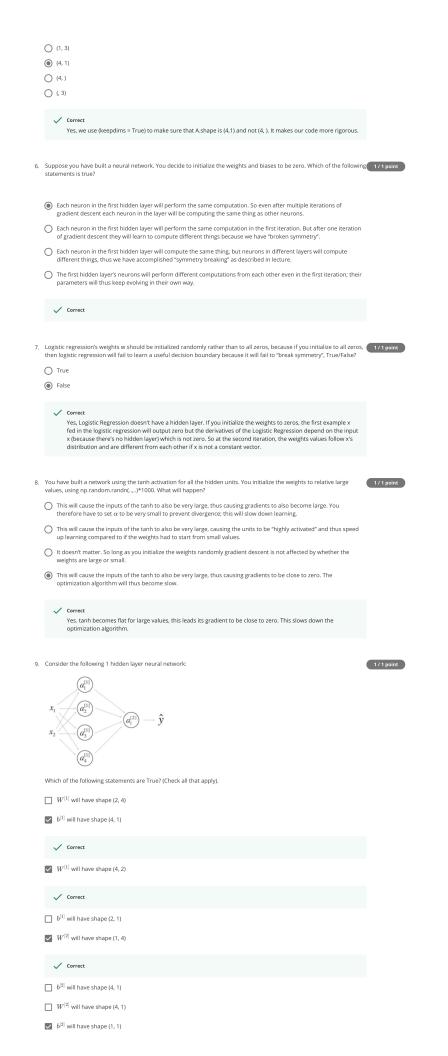
Shallow Neural Networks LATEST SUBMISSION GRADE 100%			
1.	Which of the following are true? (Check all that apply.)	1/1 point	
	✓ Correct		
	$\boxed{ a_4^{[2]} \text{ is the activation output of the } 2^{nd} \text{ layer for the } 4^{th} \text{ training example}}$ $\boxed{ X \text{ is a matrix in which each column is one training example.}}$		
	✓ Correct		
	$oldsymbol{a} a_4^{[2]}$ is the activation output by the 4^{th} neuron of the 2^{nd} layer		
	✓ Correct		
	$igstar{a}^{(2)(12)}$ denotes the activation vector of the 2^{nd} layer for the 12^{th} training example.		
	✓ Correct		
	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $		
2.	The tanh activation usually works better than sigmoid activation function for hidden units because the mean of its output is closer to zero, and so it centers the data better for the next layer. True/False? True False	1/1 point	
	Correct Yes. As seen in lecture the output of the tanh is between -1 and 1, it thus centers the data which makes the learning simpler for the next layer.		
3.	Which of these is a correct vectorized implementation of forward propagation for layer l , where $1 \leq l \leq L$? $ \bullet Z^{[l]} = W^{[l]}A^{[l]} + b^{[l]} \\ \bullet A^{[l+1]} = g^{[l+1]}(Z^{[l]}) \\ \bullet Z^{[l]} = W^{[l-1]}A^{[l]} + b^{[l-1]} \\ \bullet A^{[l]} = g^{[l]}(Z^{[l]}) $	1/1 point	
	$ \begin{array}{ll} \bullet & Z^{[l]} = W^{[l]}A^{[l]} + b^{[l]} \\ \bullet & A^{[l+1]} = g^{[l]}(Z^{[l]}) \\ \\ \bullet & & Z^{[l]} = W^{[l]}A^{[l-1]} + b^{[l]} \\ \bullet & & A^{[l]} = g^{[l]}(Z^{[l]}) \end{array} $		
	✓ Correct		
4.	You are building a binary classifier for recognizing cucumbers (y=1) vs. watermelons (y=0). Which one of these activation functions would you recommend using for the output layer? ReLU Leaky ReLU sigmoid tanh	1/1 point	
	Correct Yes. Sigmoid outputs a value between 0 and 1 which makes it a very good choice for binary classification. You can classify as 0 if the output is less than 0.5 and classify as 1 if the output is more than 0.5. It can be done with tanh as well but it is less convenient as the output is between -1 and 1.		

5. Consider the following code:

1 / 1 point

1 A = np.random.randn(4,3) 2 B = np.sum(A, axis = 1, keepdims = True)

What will be B.shape? (If you're not sure, feel free to run this in python to find out).



✓ Correct	
10. In the same network as the previous question, what are the dimensions of $Z^{[1]}$ and $A^{[1]}$?	1/1 point
$igcup Z^{[1]}$ and $A^{[1]}$ are (1,4)	
$igcirc Z^{[1]}$ and $A^{[1]}$ are (4,1)	
$lacktriangle Z^{[1]}$ and $A^{[1]}$ are (4,m)	
$igcomes Z^{[1]}$ and $A^{[1]}$ are (4,2)	
Correct	