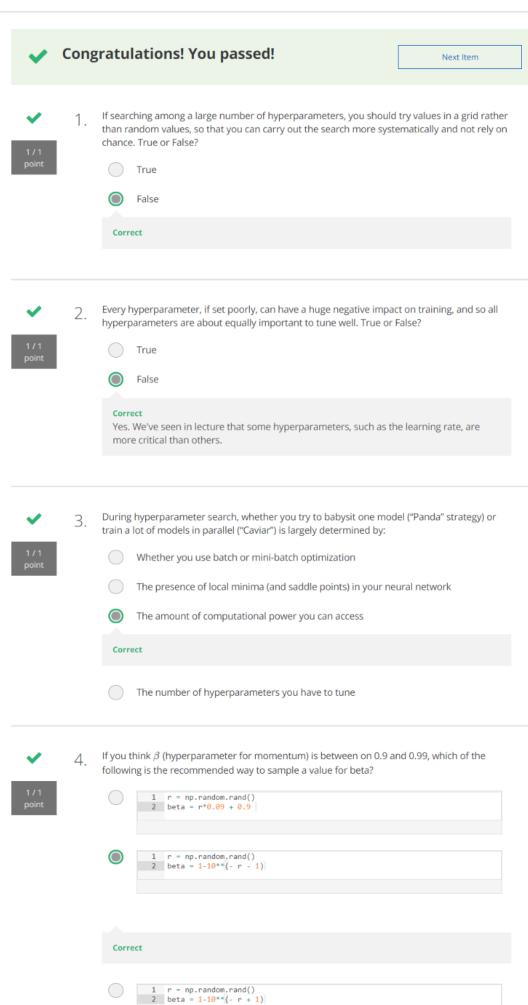
Quiz, 10 questions



	1 r = np.random.rand() 2 beta = r*0.9 + 0.09
✓ 5.	Finding good hyperparameter values is very time-consuming. So typically you should do it once at the start of the project, and try to find very good hyperparameters so that you don't ever have to revisit tuning them again. True or false? True False Correct
✓ 6.	In batch normalization as presented in the videos, if you apply it on the l th layer of your neural network, what are you normalizing?
√ 7. 1/1 point	In the normalization formula $z_{norm}^{(i)}=\frac{z^{(i)}-\mu}{\sqrt{\sigma^2+\varepsilon}}$, why do we use epsilon? To speed up convergence To have a more accurate normalization To avoid division by zero Correct In case μ is too small
√ 8. 1/1 point	Which of the following statements about γ and β in Batch Norm are true? They set the mean and variance of the linear variable $z^{[l]}$ of a given layer. Correct There is one global value of $\gamma \in \Re$ and one global value of $\beta \in \Re$ for each layer, and applies to all the hidden units in that layer.

		β and γ are hyperparameters of the algorithm, which we tune via random sampling.				
		Un-selected is correct				
		They can be learned using Adam, Gradient descent with momentum, or RMSprop, not just with gradient descent.				
		Correct				
		The optimal values are $\gamma=\sqrt{\sigma^2+\varepsilon}$, and $\beta=\mu$.				
		Un-selected is correct				
~	9.	After training a neural network with Batch Norm, at test time, to evaluate the neural network on a new example you should:				
1/1 point		Skip the step where you normalize using μ and σ^2 since a single test example cannot be normalized.				
		Use the most recent mini-batch's value of μ and σ^2 to perform the needed normalizations.				
		Perform the needed normalizations, use μ and σ^2 estimated using an exponentially weighted average across mini-batches seen during training.				
		Correct				
		If you implemented Batch Norm on mini-batches of (say) 256 examples, then to evaluate on one test example, duplicate that example 256 times so that you're working with a mini-batch the same size as during training.				
~	10.	Which of these statements about deep learning programming frameworks are true? (Check all that apply)				
1/1 point		A programming framework allows you to code up deep learning algorithms with typically fewer lines of code than a lower-level language such as Python.				
		Correct				
		Deep learning programming frameworks require cloud-based machines to run.				
		Un-selected is correct				
		Even if a project is currently open source, good governance of the project helps ensure that the it remains open even in the long term, rather than become closed or modified to benefit only one company.				
		Correct				