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TO PASS 80% or higher

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GRADE  
80%

## Deep convolutional models

LATEST SUBMISSION GRADE

80%

1. Which of the following do you typically see as you move to deeper layers in a ConvNet?

0 / 1 point



Incorrect

**nH and nW decrease, while nC increases**

2. Which of the following do you typically see in a ConvNet? (Check all that apply.)

1 / 1 point



Correct

3. In order to be able to build very deep networks, we usually only use pooling layers to downsize the height/width of the activation volumes while convolutions are used with "valid" padding. Otherwise, we would downsize the input of the model too quickly.

1 / 1 point



Correct

4. Training a deeper network (for example, adding additional layers to the network) allows the network to fit more complex functions and thus almost always results in lower training error. For this question, assume we're referring to "plain" networks.

1 / 1 point



Correct

5. The following equation captures the computation in a ResNet block. What goes into the two blanks above?

1 / 1 point

$$a^{[l+2]} = g(W^{[l+2]}g(W^{[l+1]}a^{[l]} + b^{[l+1]}) + b^{[l+2]} + \text{_____}) + \text{_____}$$

✓ Correct

6. Which ones of the following statements on Residual Networks are true? (Check all that apply.)

0 / 1 point

! Incorrect

The skip-connection makes it easy for the network to learn an identity mapping between the input and the output within the ResNet block.

Using a skip-connection helps the gradient to backpropagate and thus helps you to train deeper networks

7. Suppose you have an input volume of dimension 64x64x16. How many parameters would a single 1x1 convolutional filter have (including the bias)?

1 / 1 point

✓ Correct

8. Suppose you have an input volume of dimension  $n_H \times n_W \times n_C$ . Which of the following statements you agree with? (Assume that "1x1 convolutional layer" below always uses a stride of 1 and no padding.)

1 / 1 point

✓ Correct

9. Which ones of the following statements on Inception Networks are true? (Check all that apply.)

1 / 1 point

✓ Correct

10. Which of the following are common reasons for using open-source implementations of ConvNets (both the model and/or weights)? Check all that apply.

1 / 1 point

✓ Correct