



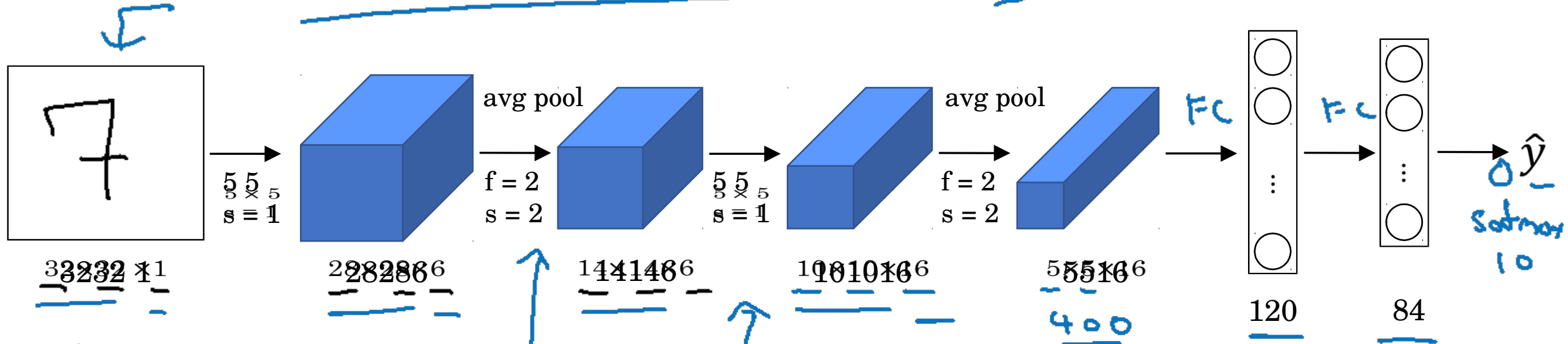
**deeplearning.ai**

# Case Studies

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Classic  
networks

# LeNet - 5



60K parameters.

$n_H, n_W \downarrow$

$n_C \uparrow$

non-linearly  
over pooling

$n_H \times n_W \times n_C$

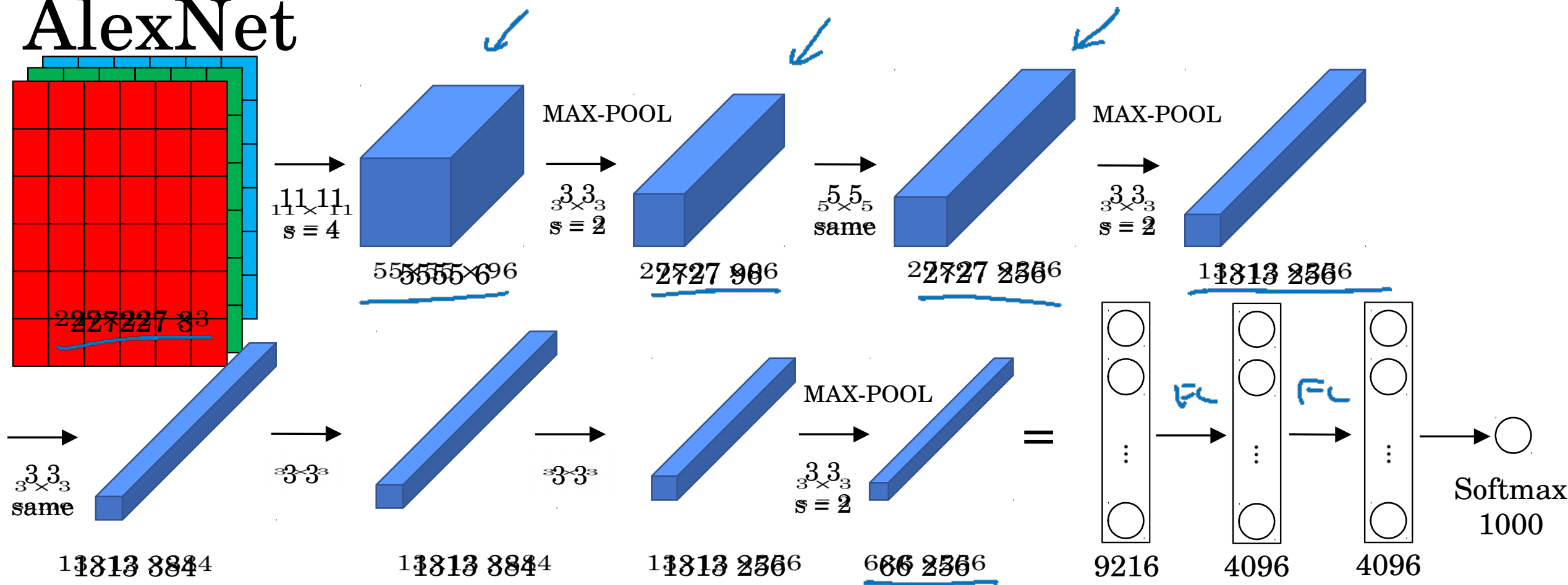
$f \times f \times n_C$

conv pool conv pool fc fc output

Activation: sigmoid/tanh ReLU



# AlexNet



- Similar to LeNet, but much bigger.

- ReLU

- Multiple GPUs.

- Local Response Normalization (LRN)



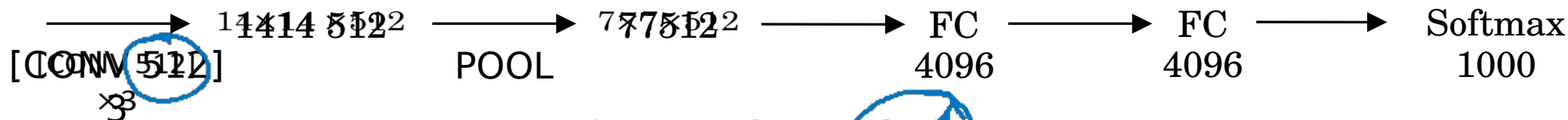
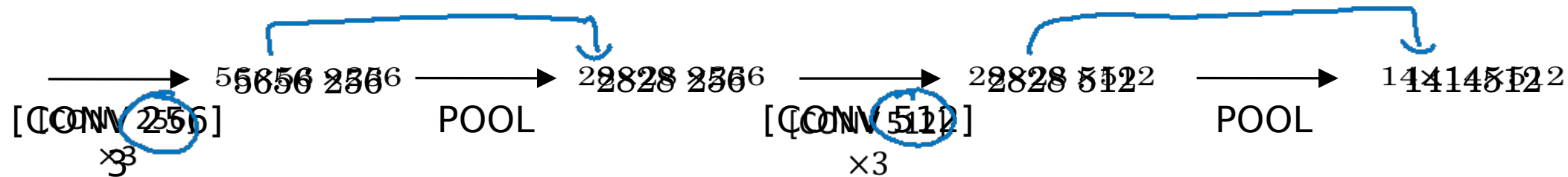
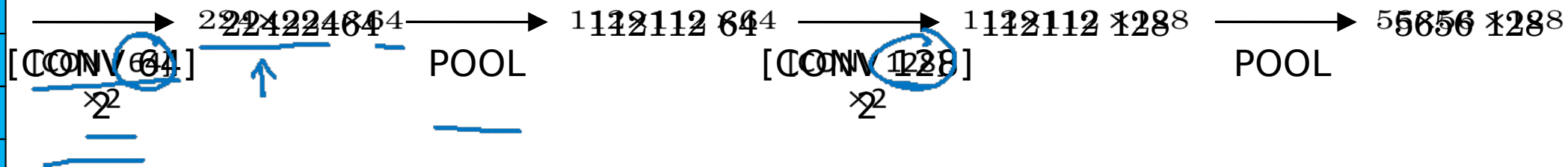
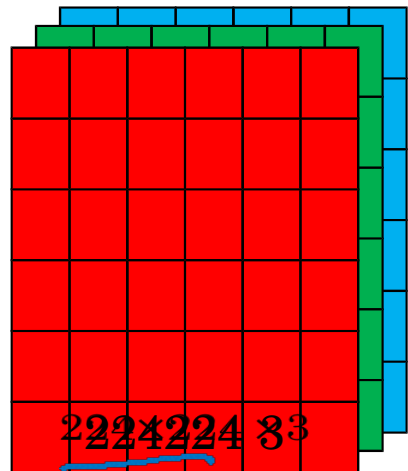
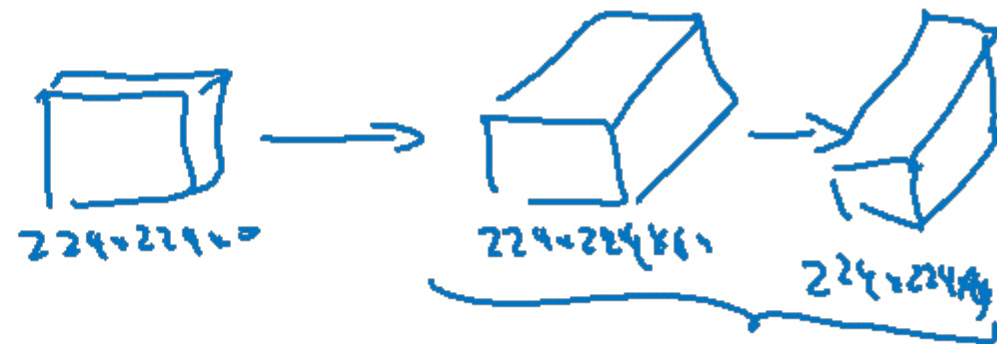
~60M parameters

# VGG - 16

CONV = 3x3 filter, s=1, same

VGG-19

MAX-POOL = 2x2, s=2



$n_h, n_w \downarrow$

$n_c \uparrow$

~138M