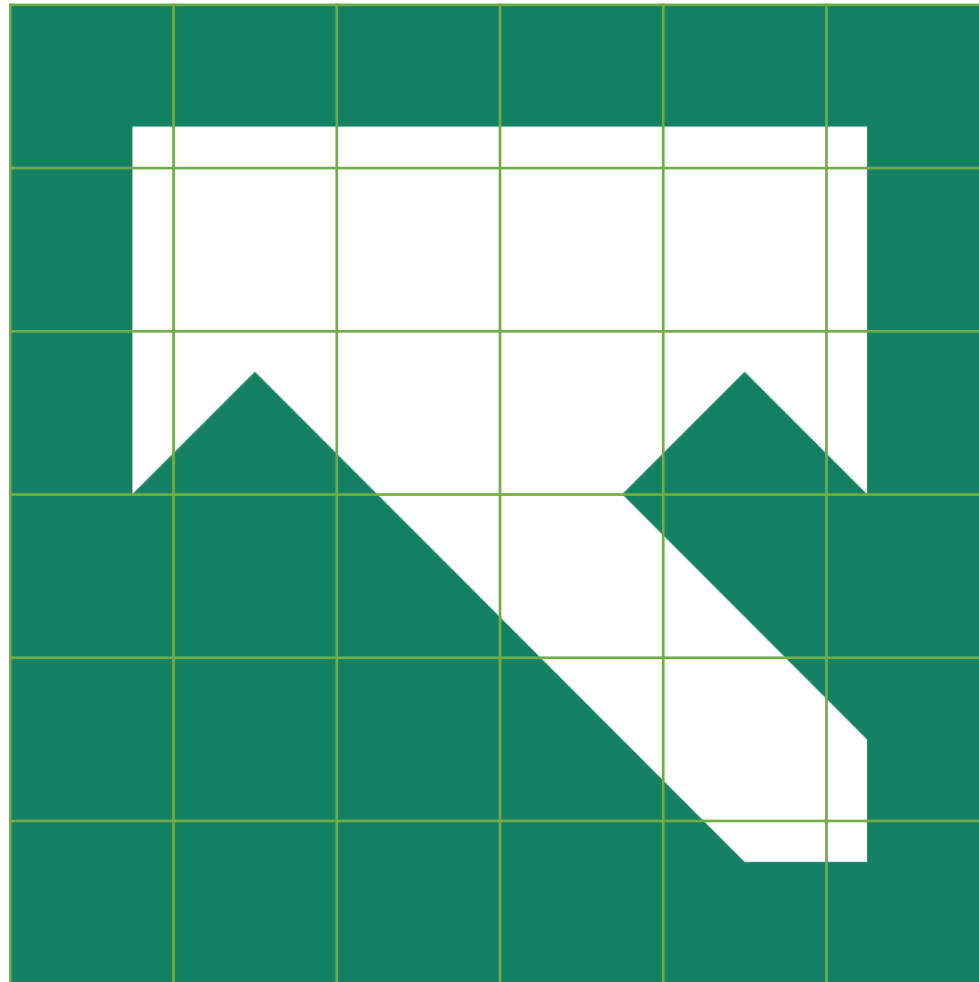
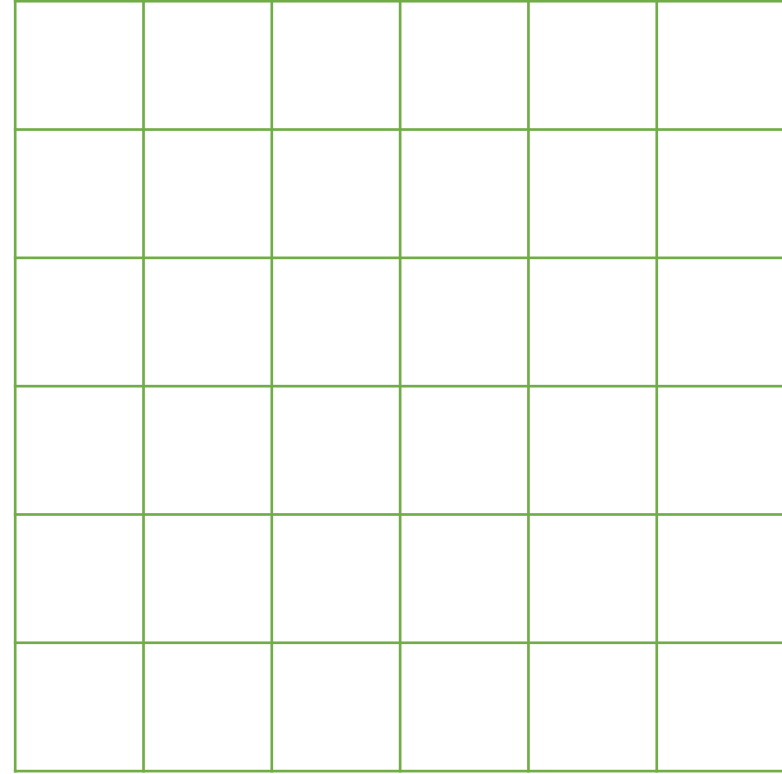


# Images as Arrays



# Images as Arrays



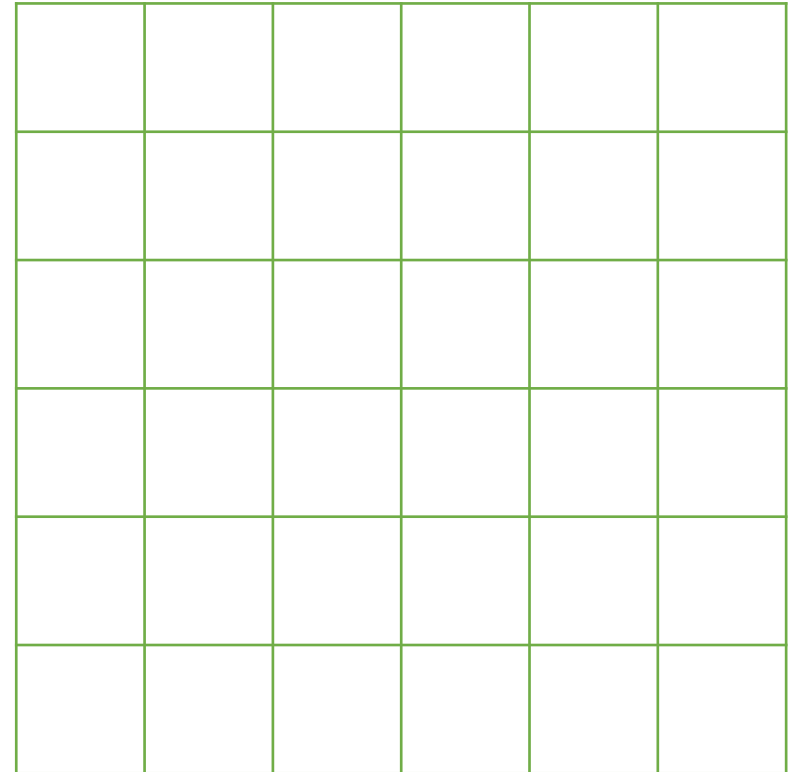
Each pixel holds a value on the type of image

# RGB Images



RGB values are for color images

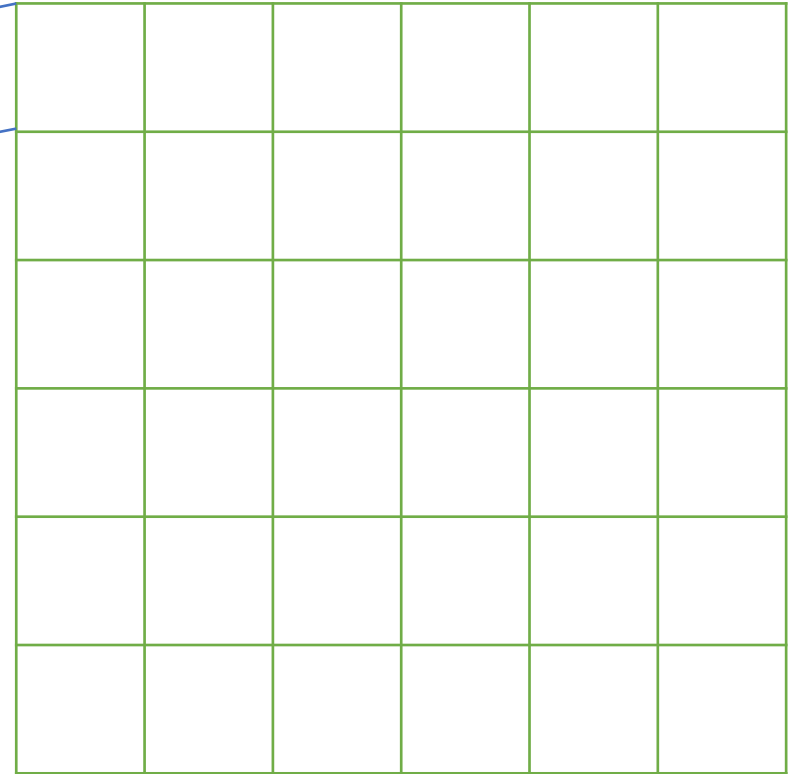
R, G, B: 0-255



# RGB Images



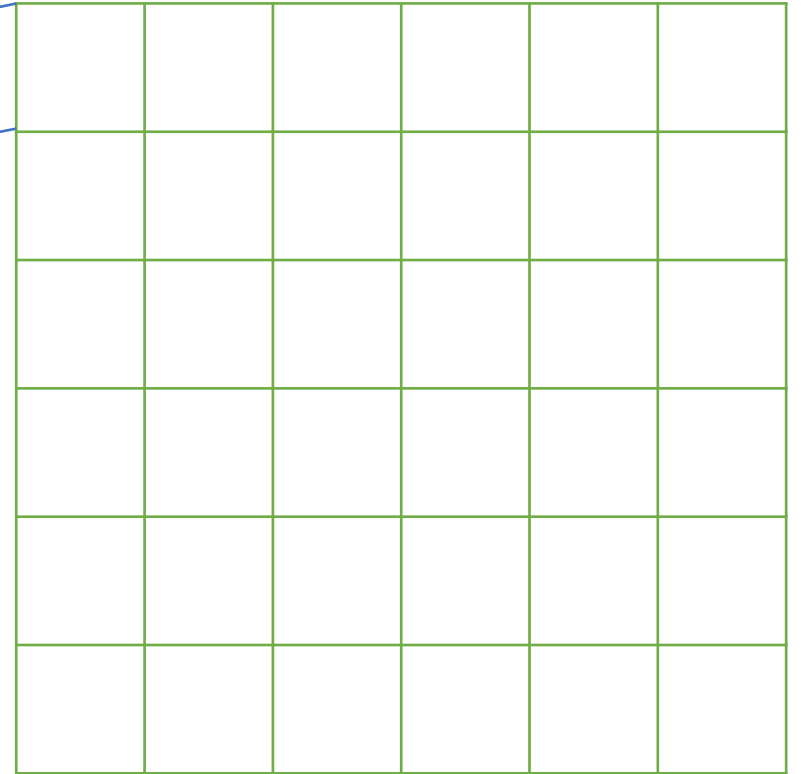
255, 0, 0



# RGB Images



0, 255, 0

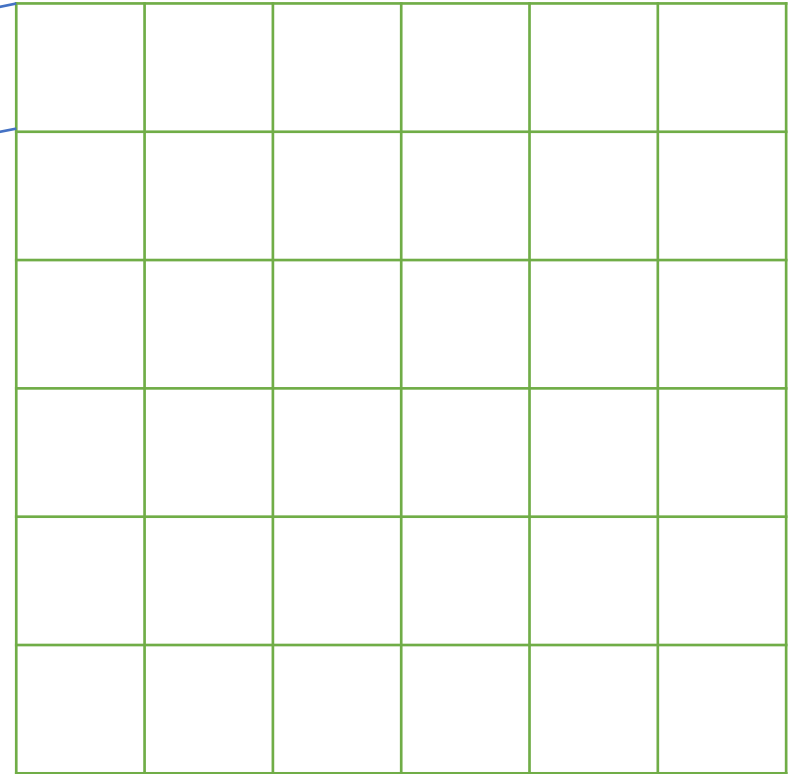


# RGB Images

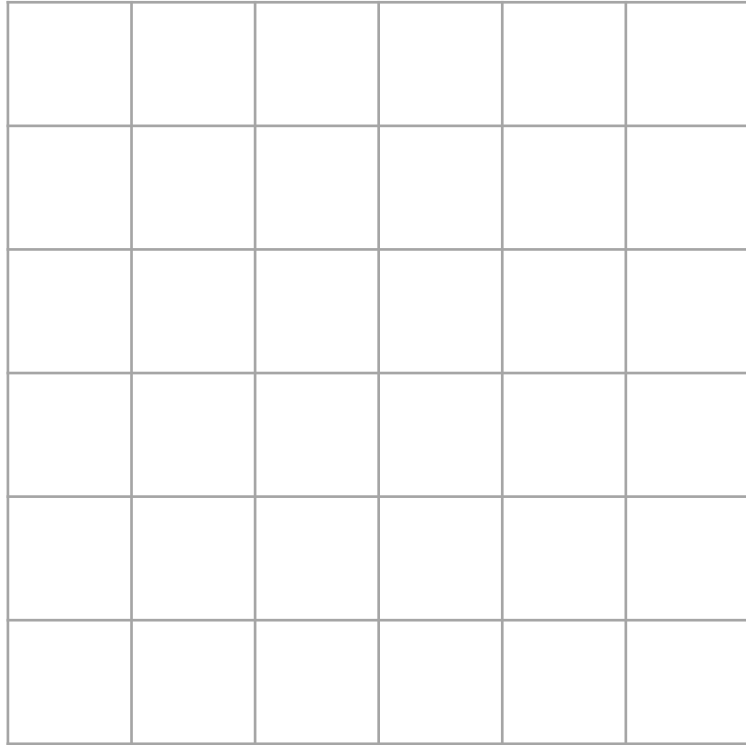


0, 0, 255

3 values to represent  
color, 3 channels



# Grayscale Images

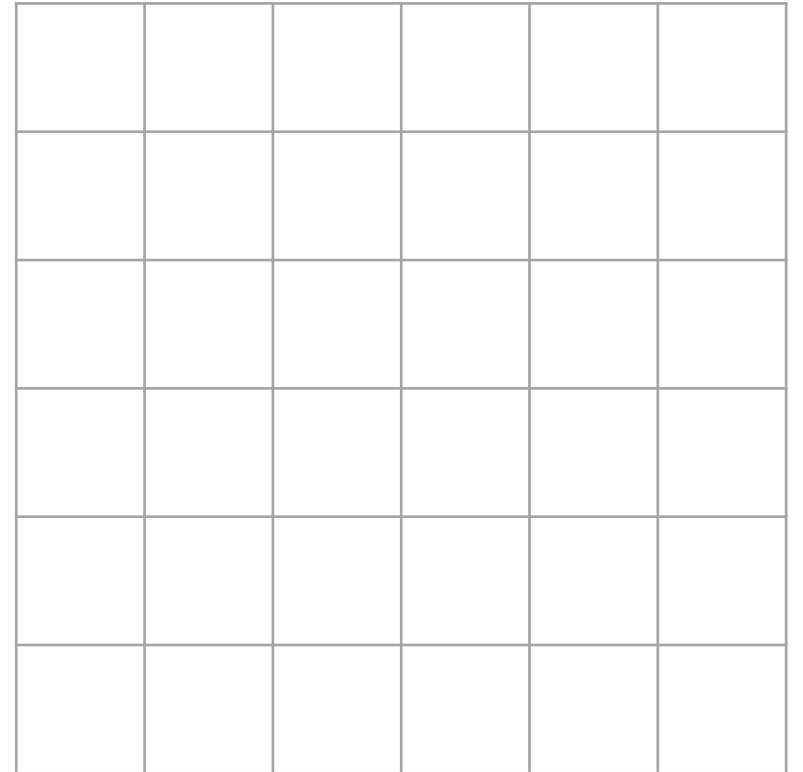


# Grayscale Images



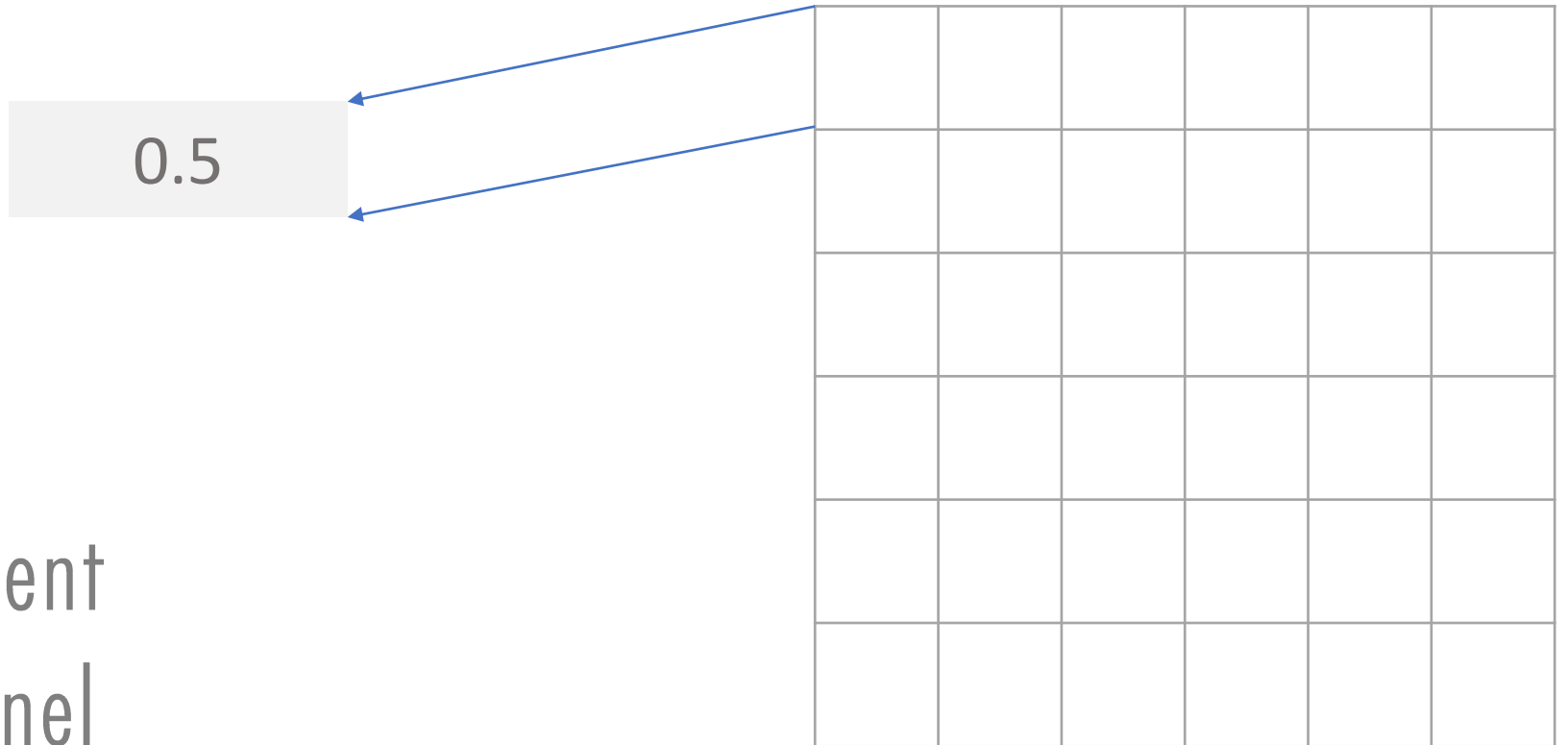
Each pixel represent only  
intensity information

0.0 – 1.0





# Grayscale Images



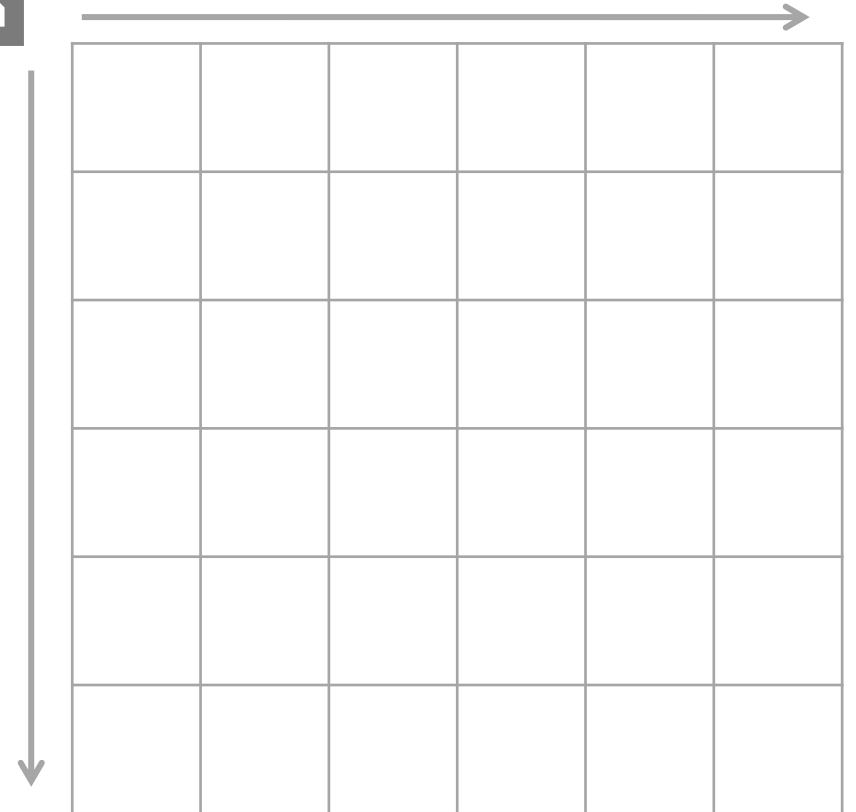
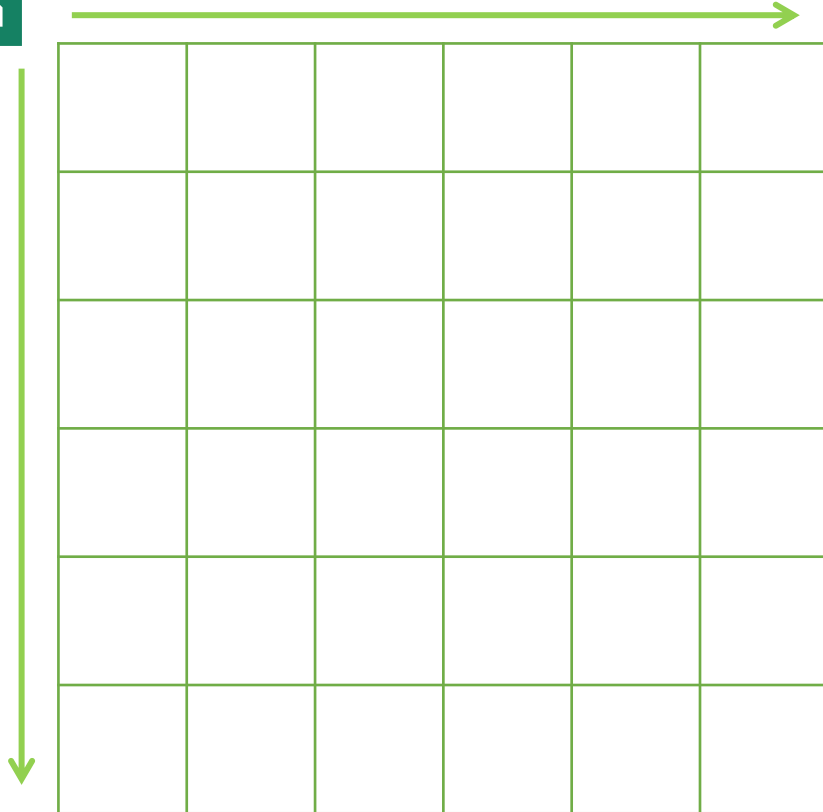
1 value to represent  
intensity, 1 channel

# Images as Arrays



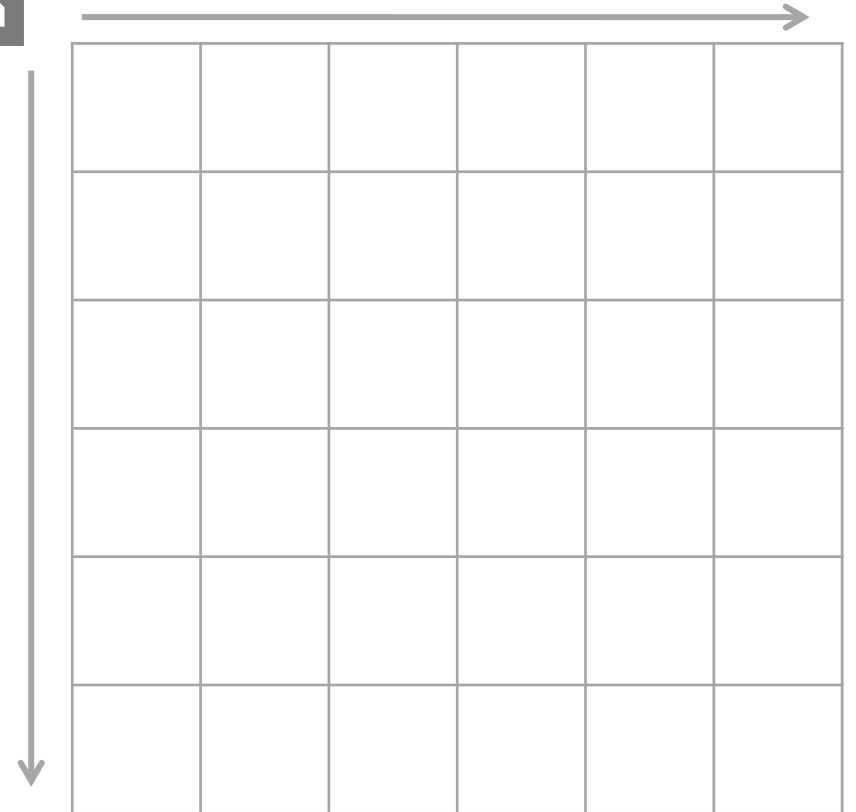
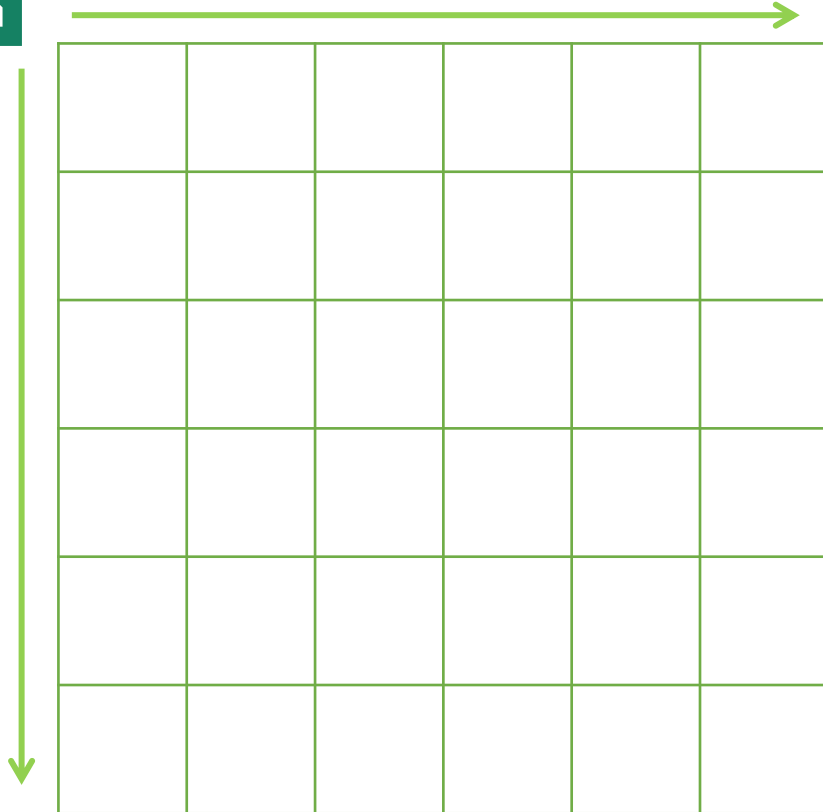
Multi-channel and Single channel images

# Images as Arrays



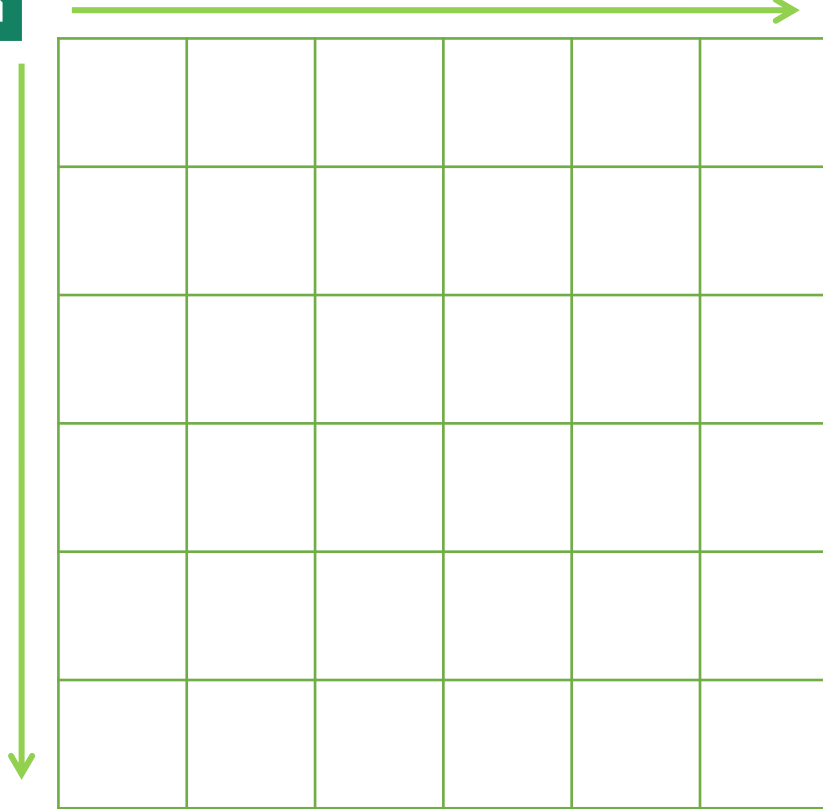
Images can be represented by a 3-D matrix

# Images as Arrays

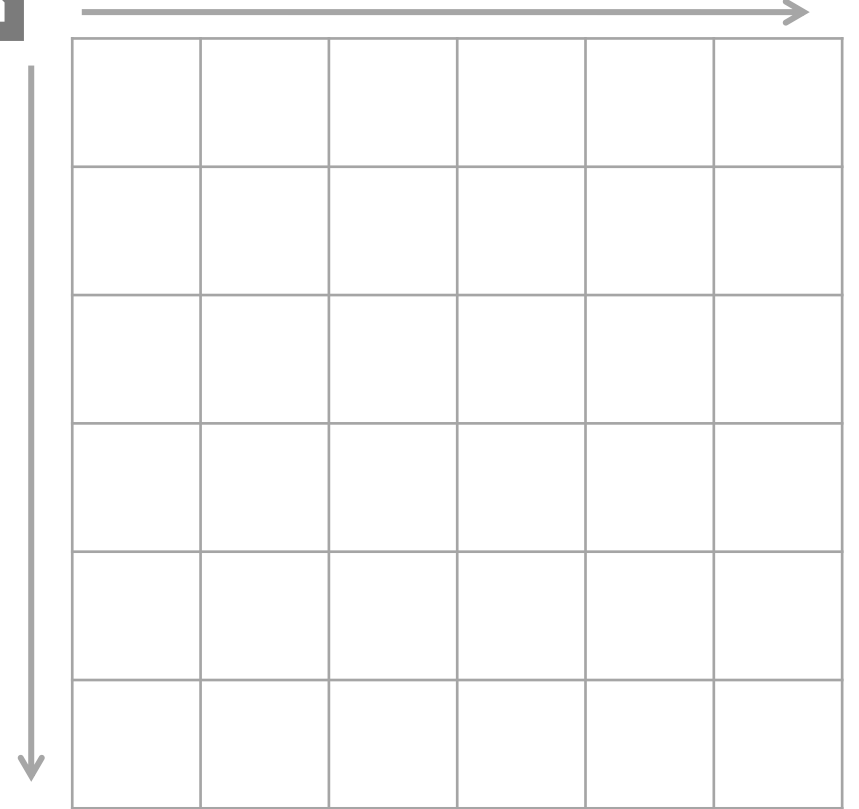


The **number of channels** specifies the **number of elements** in the 3<sup>rd</sup> dimension

# Images as Arrays



(6, 6, 3)



(6, 6, 1)