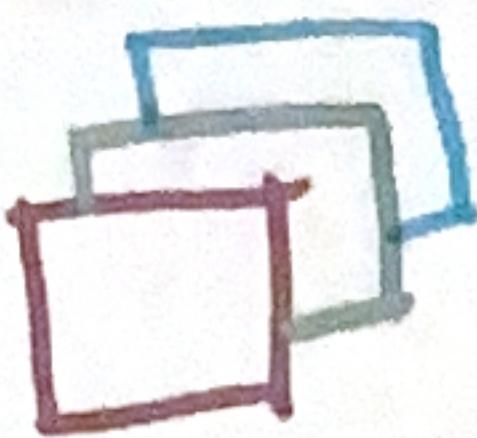
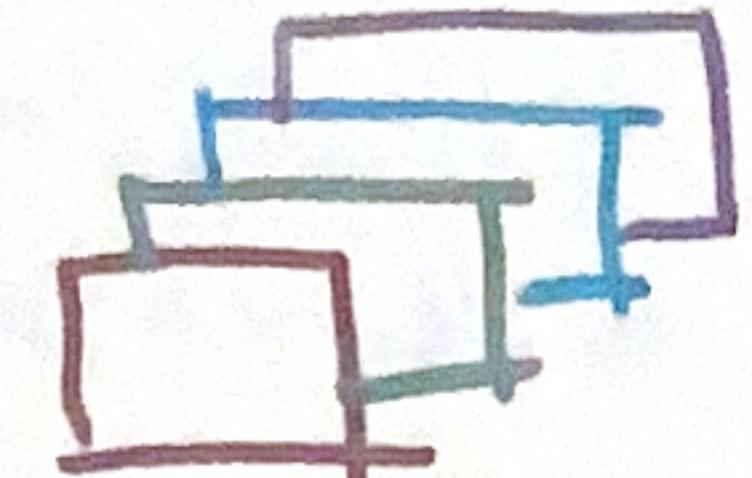


# COLORS



Color Image  
RGB

Each layer  
is 8 bits/px  
3 layers = 24 px



RGBA Image  
with Alpha  
(transparency)  
4 layers = 32 px



Gray Level  
Image  
8 bits/px



Binary  
Image  
1 bit/px

ex// RGB Image  $\rightarrow$  8 bits/pixel = 1 byte

600x480 channel

$$\text{Size(MB)} = \frac{3 \text{ bytes} \times 600 \times 480}{1024} / 1024 \rightarrow \text{Byte} \rightarrow \text{KB} \rightarrow \text{MB}$$

$$1 \text{ byte} = 8 \text{ bits} \\ 1024 \times 1024$$

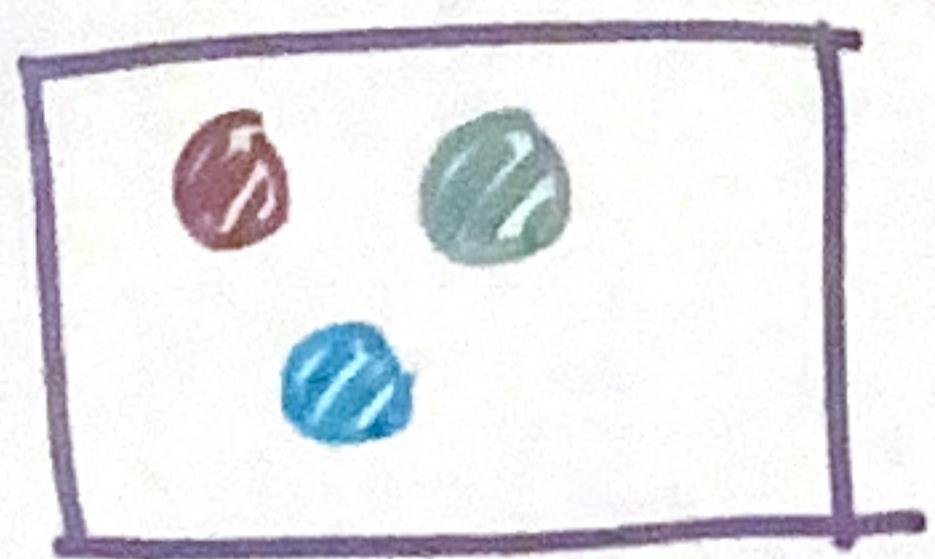
$$1 \text{ MB} = \cancel{1024} \text{ byte} \\ 1 \text{ MB} = \frac{1024 \times 1024}{1024} \text{ kilobyte}$$

ex// Binary Image  
600x400  
1 bit/px

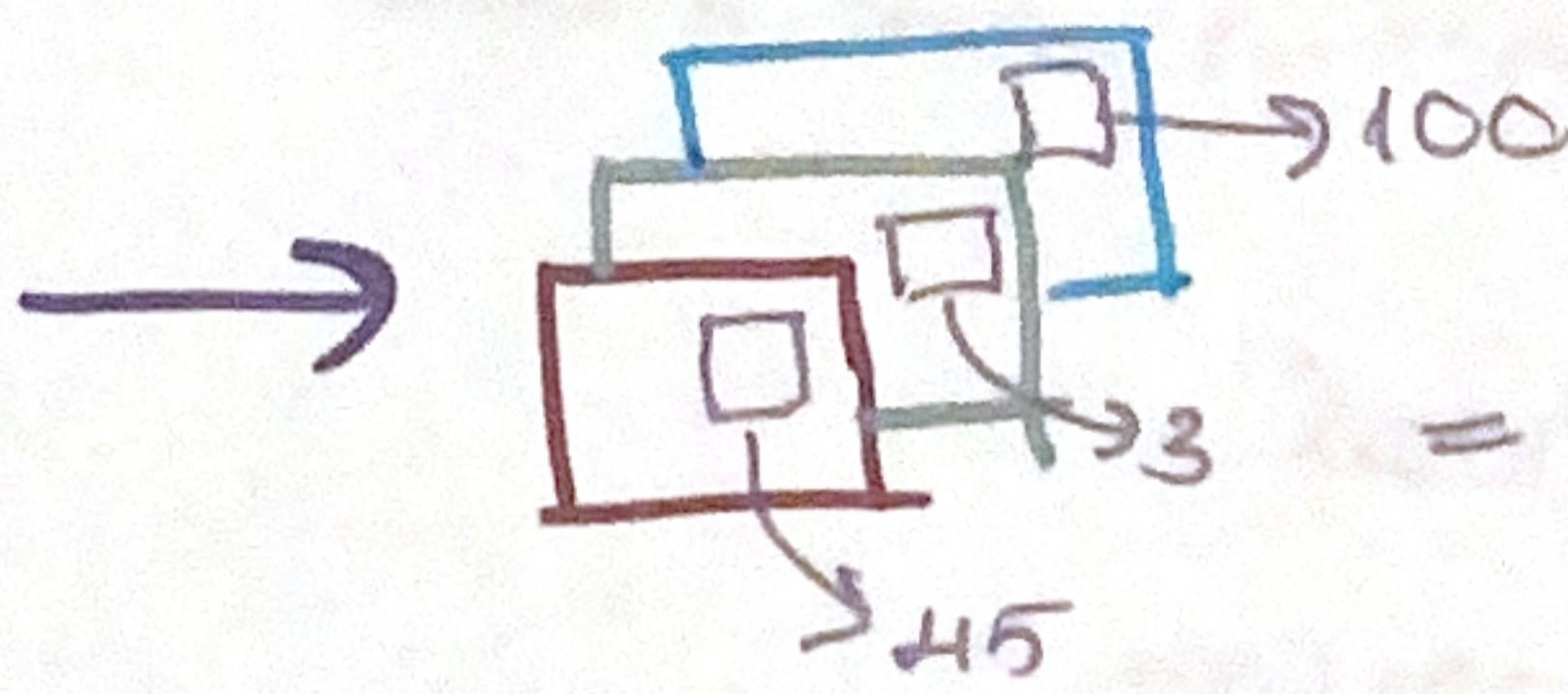
$$\frac{600 \times 400 \times 1}{8} / 1024 / 1024 \rightarrow \text{Byte} \rightarrow \text{KB} \rightarrow \text{MB}$$

ex// HD Image (1920x1080)  
RGB

$$\rightarrow 3 \text{ bytes} \times 1920 \times 1080 / 1024 / 1024$$



Pixel



= we need a  
palette to  
answer!

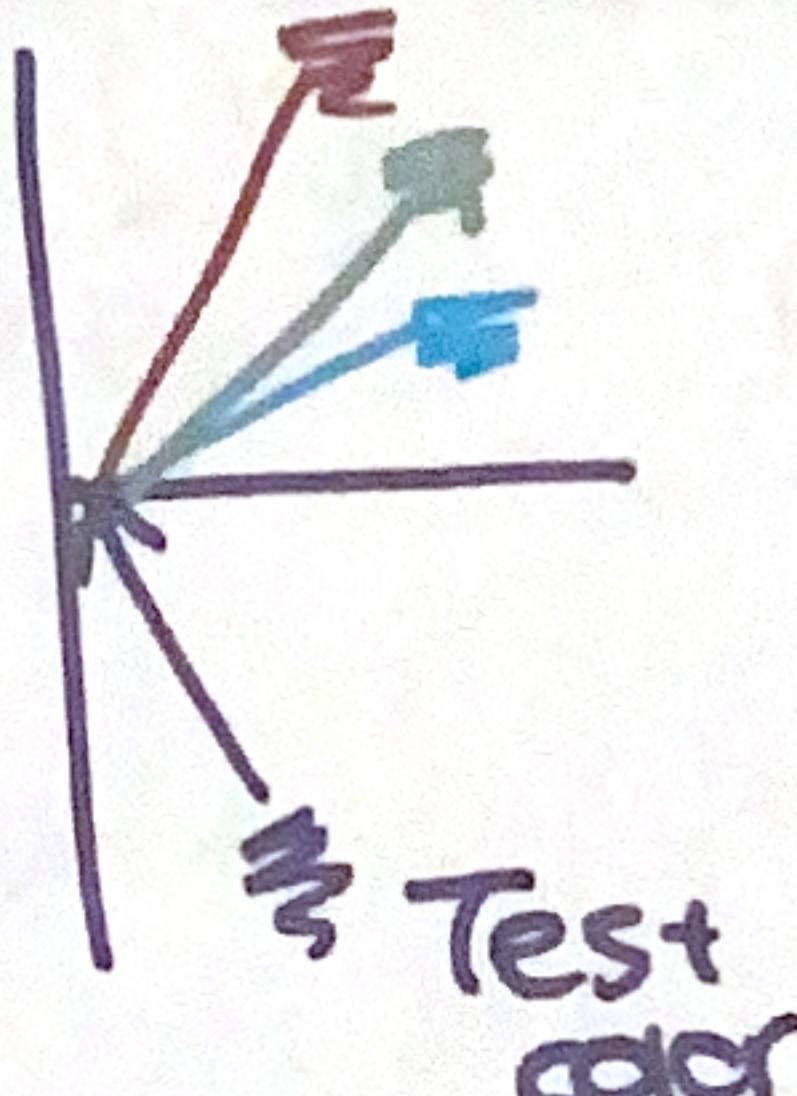
$$390 \rightarrow 3 \\ 710 \rightarrow 2$$

Colorimeter

UV

VS

IR



Observer  
Masking Screen

To define 3D perceptual space, observers match color of a given wavelength  $\lambda$  to Lambda by mixing three other pure wavelengths phosphors of color TUS & other CRTs do not emit pure R, G or B light of a single wavelength.