

Vectors



ray



pixel

RGB

8 bits

0..255

R

G

B

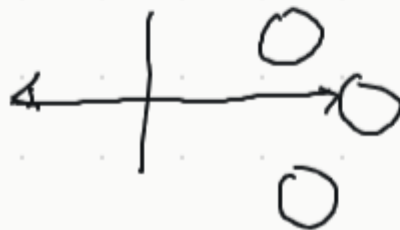
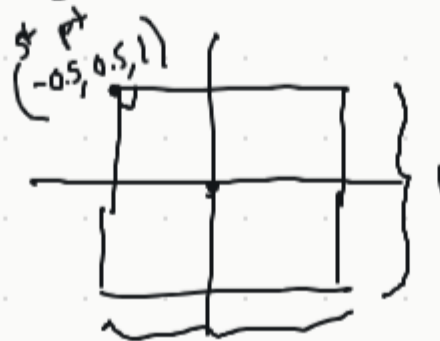
black

0

0

0

255 0 0 red
255 255 255 white



(x,y) image pixel
location

1000 x 1000

each pixel $\frac{1}{1000} \times \frac{1}{1000}$

$$x_{3D} = -0.5 + \frac{x}{1000}$$

$$y_{3D} = 0.5 - \frac{y}{1000}$$

$$z_{3D} \approx 1$$