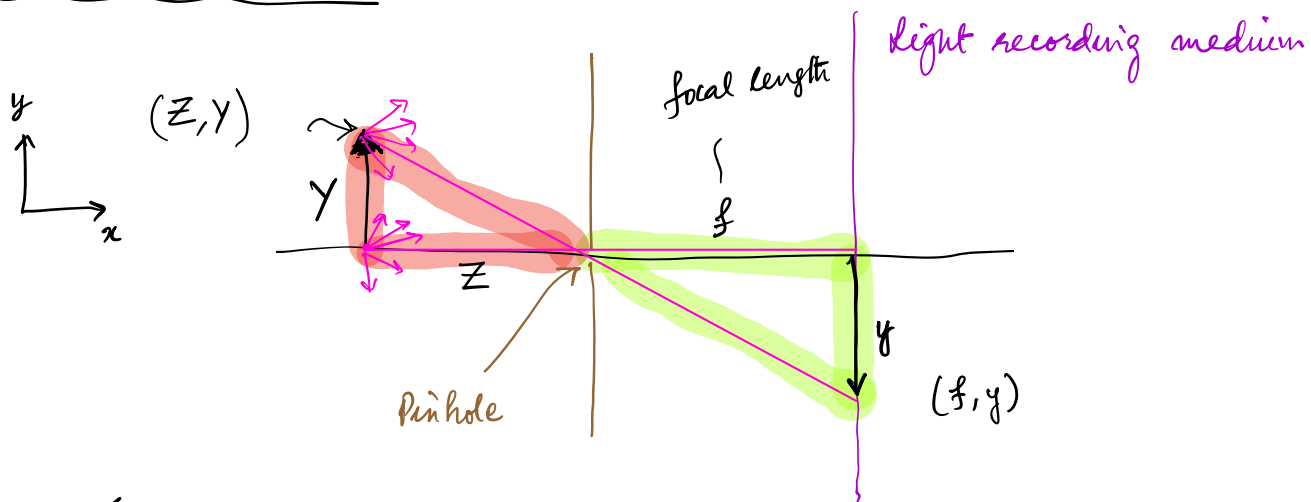


Image formation

PINHOLE CAMERA MODEL



$Z \checkmark$

$f \checkmark$

$Y \leftrightarrow y$

$$\frac{Y}{Z} = \frac{y}{f}$$

$$\Rightarrow \boxed{y = f \frac{Y}{Z}} \quad *$$

(x, y, z)

world

(x, y)

image

$$\boxed{\begin{aligned} x &= f \frac{X}{Z} \\ y &= f \frac{Y}{Z} \end{aligned}}$$

3D world $\rightarrow$ 2D image,