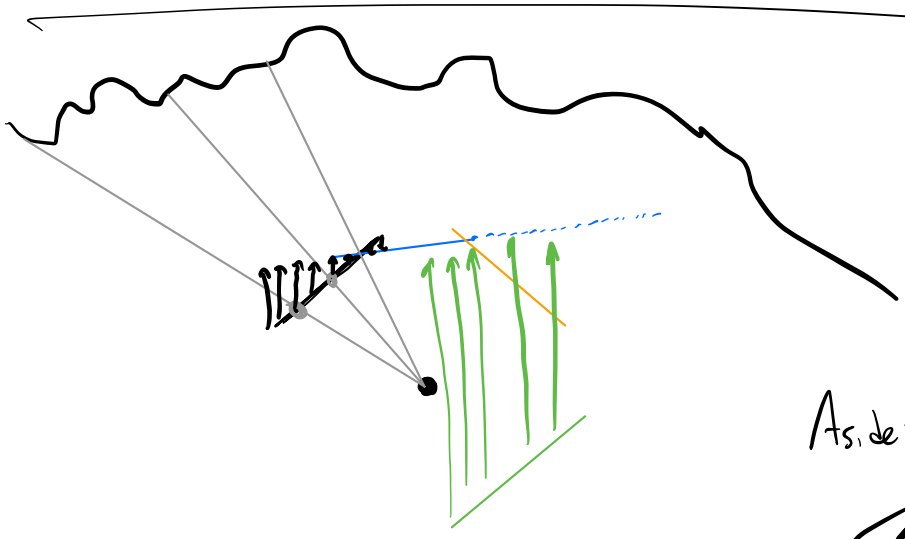
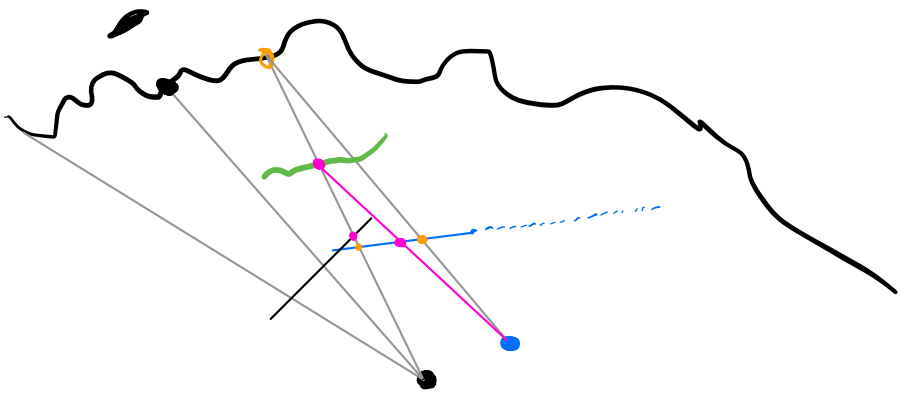
Lecture 11: Pinhole Camera, Depth from Disparity

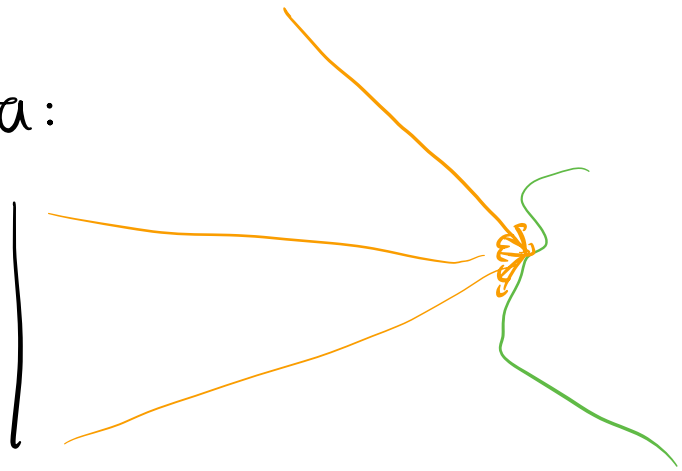


Aside: 360 can be done

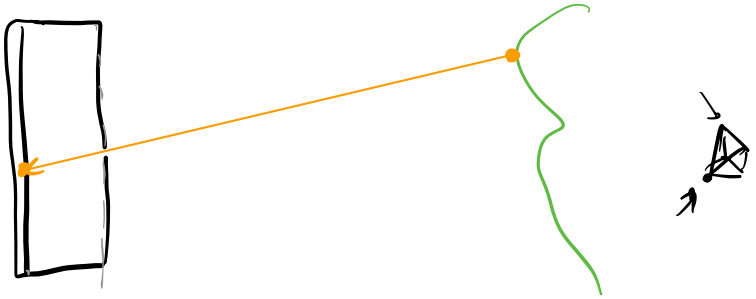


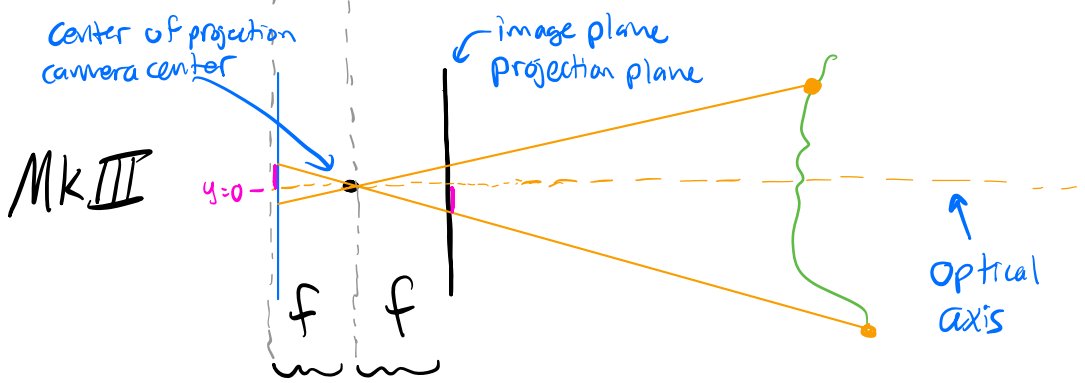
Camera:

MkI

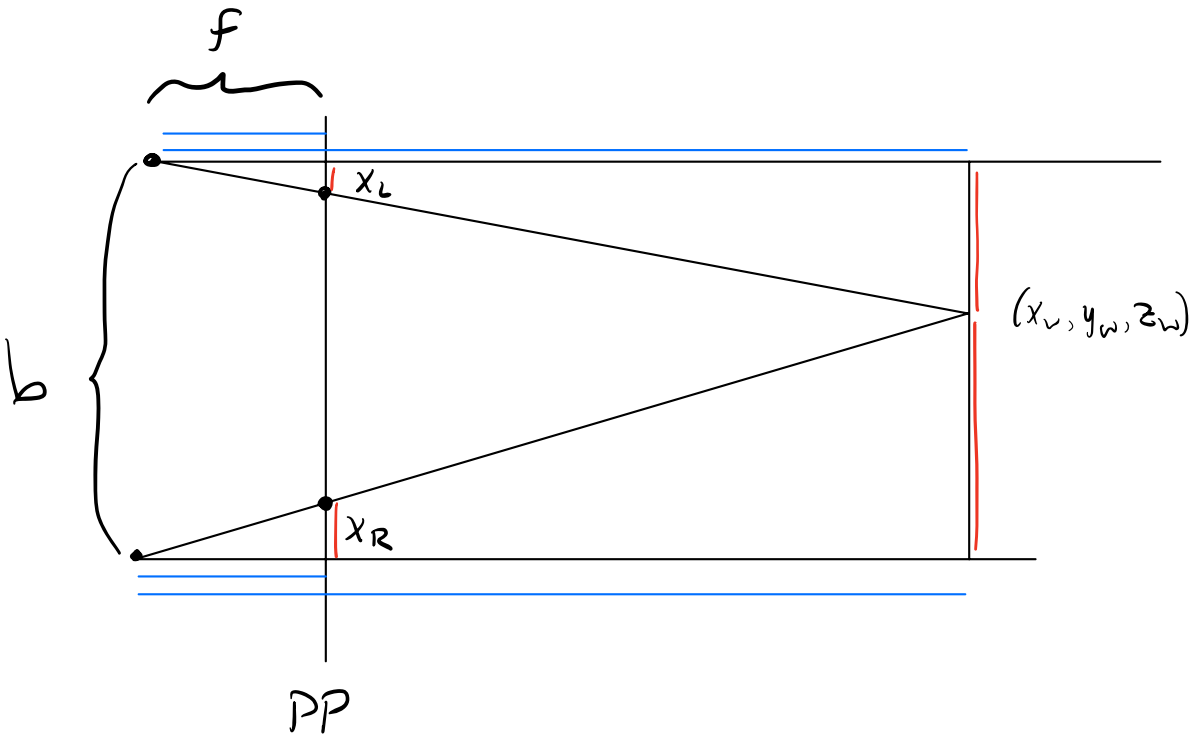


MkII





$$x_{pixel} = \underbrace{\begin{bmatrix} \text{Intrinsics} \end{bmatrix}}_{x_{pixel}} \underbrace{\begin{bmatrix} \text{Projection} \end{bmatrix}}_{x_{cam}} \overbrace{\begin{bmatrix} \text{Extrinsics} \end{bmatrix}}^{R|t} x_{world}$$



$$\frac{z_w}{f} = \frac{x_w}{x_L} \qquad \frac{z_w}{f} = \frac{b - x_w}{-x_r}$$

(algebra!)

$$z_w = \frac{fb}{x_R - x_L}$$