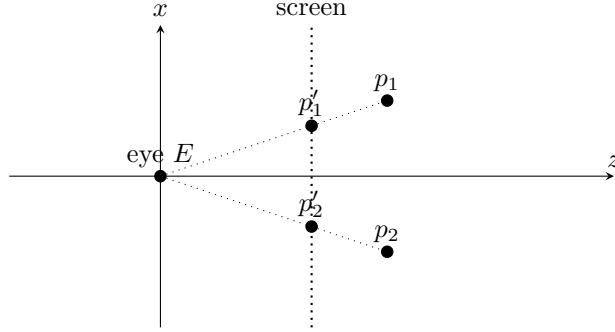


# 1 3D Projection



When we refer to  $p$  we mean either  $p_1$  or  $p_2$ . When we refer to  $p'$  we mean either  $p'_1$  or  $p'_2$ .

$$p = (p_x, p_y, p_z) \quad (1)$$

$$p' = (p'_x, p'_y, S_z) \quad (2)$$

$$E = (E_x, E_y, E_z) \quad (3)$$

$$(4)$$

The formula to find  $p'$

$$p'_y = \frac{(p_y - E_y)(S_z - E_z)}{(p_z - E_z)} + E_y \quad (5)$$

$$p'_x = \frac{(p_x - E_x)(S_z - E_z)}{(p_z - E_z)} + E_x \quad (6)$$

$$(7)$$

If we assume that  $E = (0, 0, 0)$  and  $S_z = 1$

$$p'_y = \frac{p_y}{p_z} \quad (8)$$

$$p'_x = \frac{p_x}{p_z} \quad (9)$$

$$(10)$$