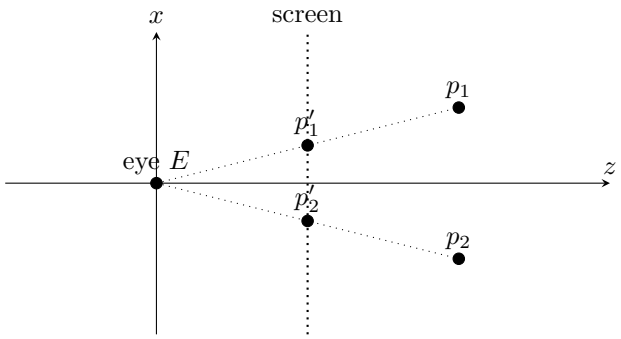
1 3D Projection



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.

$$p = (p_x, p_y, p_z) \tag{1}$$
$$p' = (p'_x, p'_y, S_z) \tag{2}$$
$$E = (E_x, E_y, E_z) \tag{3}$$
$$\tag{4}$$

The formula to find p'

$$p'_y = \frac{(p_y - E_y)(S_z - E_z)}{(p_z - E_z)} + E_y \tag{5}$$
$$p'_x = \frac{(p_x - E_x)(S_z - E_z)}{(p_z - E_z)} + E_x \tag{6}$$
$$\tag{7}$$

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

$$p'_y = \frac{p_y}{p_z} \tag{8}$$
$$p'_x = \frac{p_x}{p_z} \tag{9}$$
$$\tag{10}$$