

newline newline

$$r = -\left(\frac{\text{eye.z}}{\text{eye.z} - \text{point.z}}\right)$$

"Intersection of vector v with screen plane to get r:"

newline

Now to get the 2D coordinates:

$$x = \text{eye.x} + \left(\frac{\text{eye.z} - \text{point.z}}{\text{eye.z} - \text{point.z}}\right) * (\text{eye.x} - \text{point.x})$$
$$\text{eye.z} = \text{point.z}$$

E = V

newline newline

a left (stack{1 # 0 # 0}right) + b left (stack{0 # 1 # 0}right) = left (stack{eye.x # eye.y # eye.z}right) + r left (stack{eye.x - point.x # eye.y - point.y # eye.z - point.z}right)

newline newline

a = eye.x + r (eye.x - point.x) newline

b = eye.y + r (eye.y - point.y) newline

0 = eye.z + r (eye.z - point.z) newline

newline

r = -({eye.z} over {eye.z - point.z})

newline newline

"Now to get the 2D coordinates:" newline

x = eye.x + (-eye.z over {eye.z - point.z}) * (eye.x - point.x) newline

y = eye.y + (-eye.z over {eye.z - point.z}) * (eye.y - point.y) newline

newline

"For eye.x = 0 and eye.y = 0:" newline

x = {eye.z * point.x} over {eye.z - point.z} newline

y = {eye.z * point.y} over {eye.z - point.z} newline