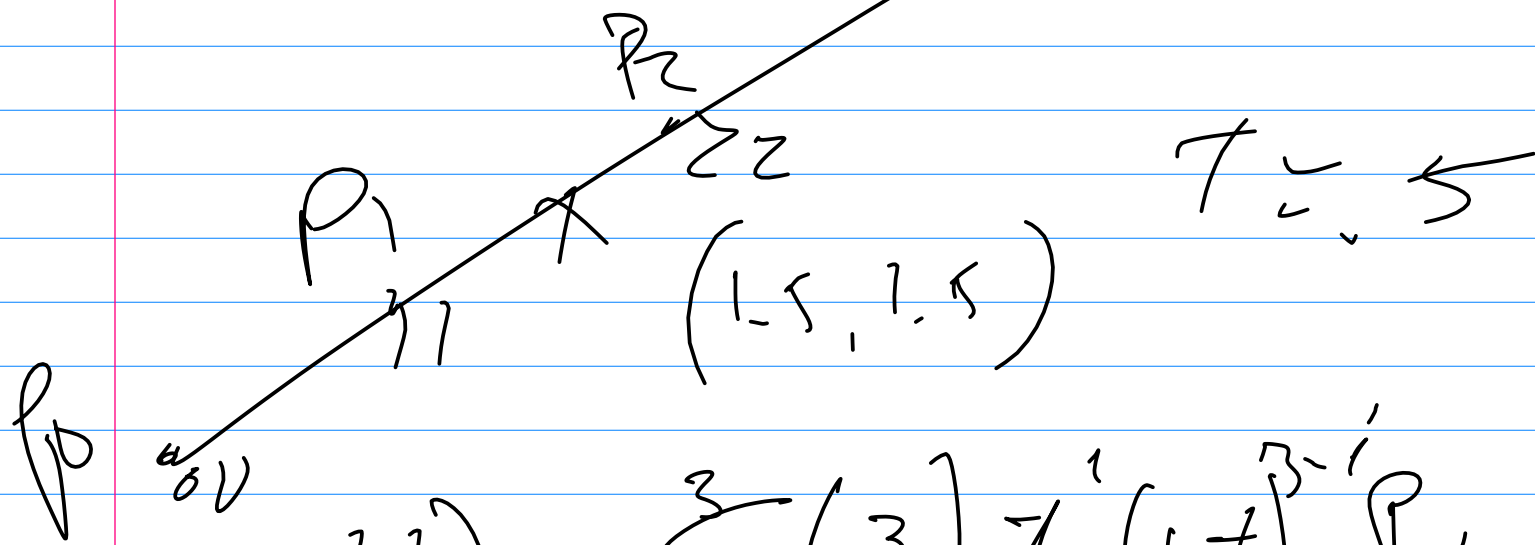
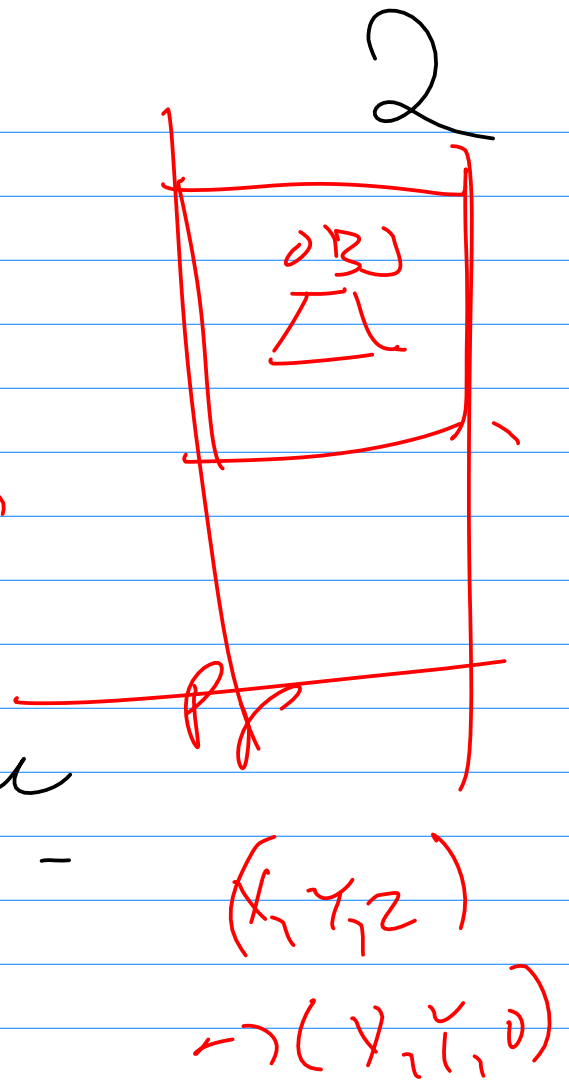
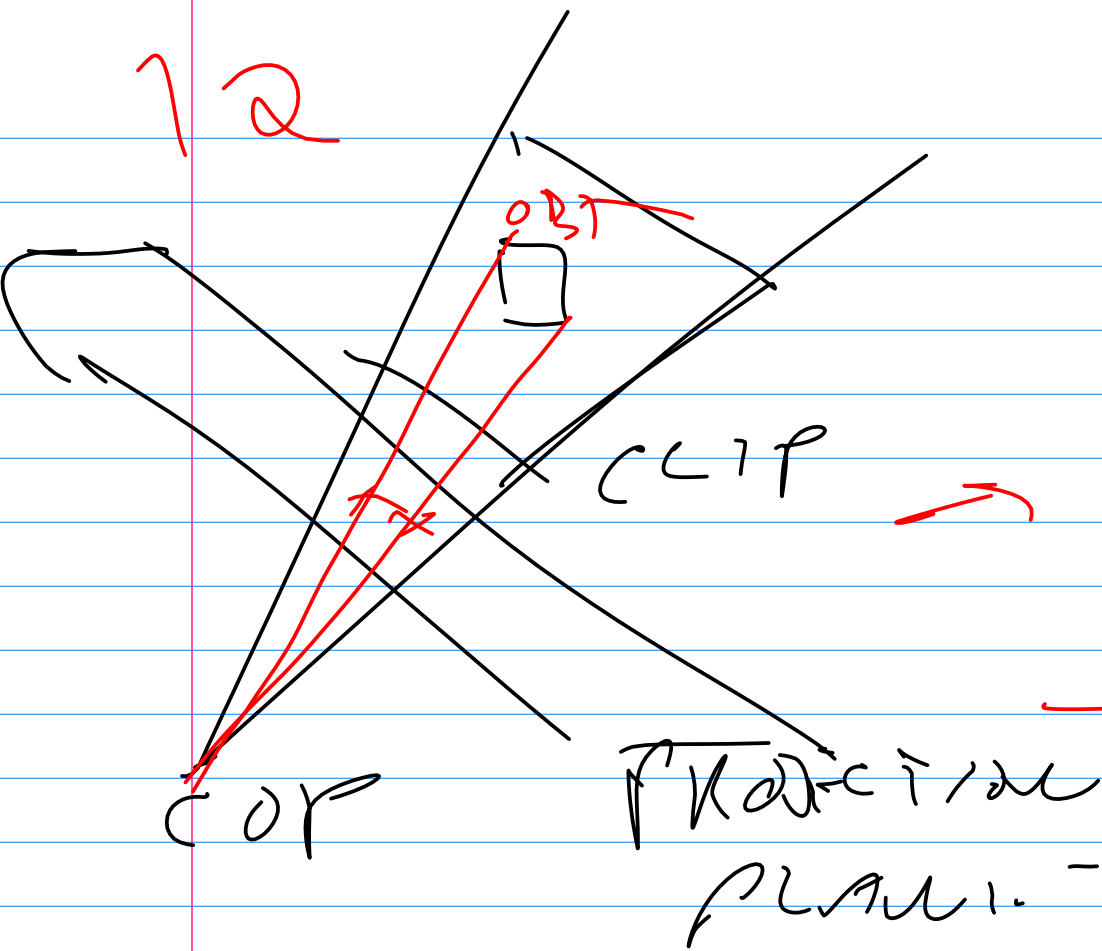


7 $\mathbb{Z} \subset \mathbb{Z} / 12\mathbb{Z}$

$12/14/17$
 $\mathbb{P}_{3,3}$



$$p(t) = \sum_{i=0}^3 \binom{3}{i} t^i (1-t)^{3-i} p_i$$



16

$$\phi = K$$

$$z = \cos \theta \rightarrow \sin \theta \left(a_x \hat{i} + a_y \hat{j} + a_z \hat{k} \right)$$

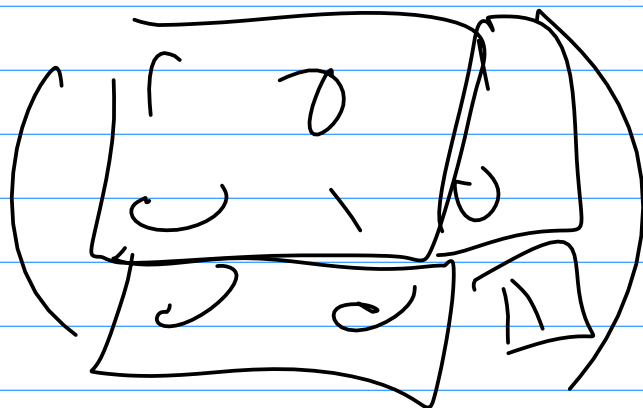
$\underbrace{\hspace{10em}}_{\text{red } 0} \quad \underbrace{\hspace{10em}}_{\text{red } 0} \quad \underbrace{\hspace{10em}}_{\text{red } 1}$

$$\cos \theta \rightarrow 0 \Rightarrow \theta = \left(\pm \frac{\pi}{2} \right) ?$$

$$\theta = 180^\circ$$

$$A \text{ vs } = (0, 0, 1)$$

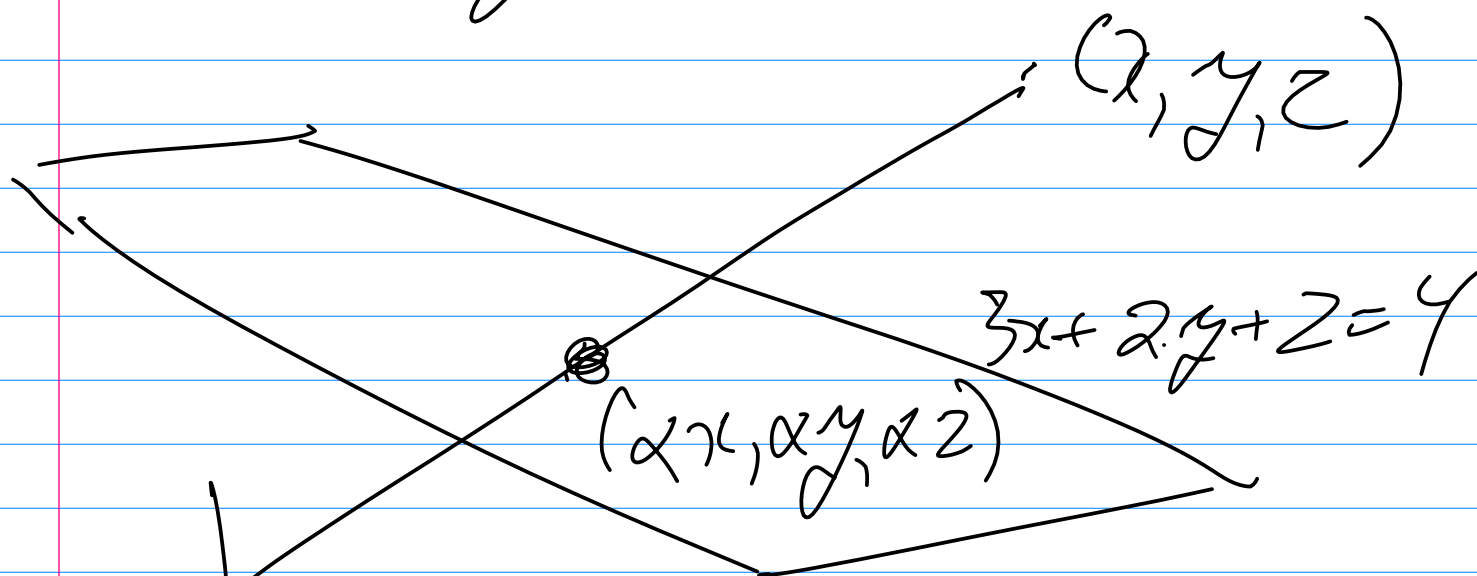
17



$$\begin{pmatrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

4

P1 $3x + 2y + z = 4$



now)

$$3\alpha x + 2\alpha y + \alpha z = 4$$

$$\alpha (3x + 2y + z) = 4$$

$$\alpha = \frac{4}{3x + 2y + z}$$

$$x' = \left(\frac{4}{3x + 2y + z} \right) x$$

eg $(x, y, z) = (10, 20, 30)$

$$\alpha = \frac{4}{30 + 40 + 30} = \frac{1}{25}$$

$\left(\frac{10}{25}, \frac{20}{25}, \frac{30}{25} \right)$