

EJERCICIO 1

Ⓐ r PASA POR $A(1,0,1)$ Y $B(2,1,2)$.

$\vec{AB}(1,1,1) \rightarrow$ VECTOR RECTA r (\vec{v}_r)

$$s \equiv x-2 = 2-y = z \quad P_s(2,2,0)$$

$$\frac{x-2}{1} = \frac{y-2}{-1} = \frac{z}{1} \quad \vec{v}_s(1,-1,1)$$

$$\mathcal{N}^* = \begin{pmatrix} \vec{v}_r & \vec{v}_s & \vec{AP}_s \\ 1 & 1 & 1 \\ 1 & -1 & 2 \\ 1 & 1 & -1 \end{pmatrix}$$

$\underbrace{\quad\quad\quad}_{\mathcal{N}}$

$$|\mathcal{N}_{2 \times 2}| = \begin{vmatrix} 1 & 1 \\ 1 & -1 \end{vmatrix} = -2 \neq 0$$

$$\text{Rango}(\mathcal{N}) = 2$$

$$|\mathcal{N}^*| = (1+1+2) - (-1+2-1) = 4 - (0) = 4 \neq 0$$

$$\text{Rango}(\mathcal{N}^*) = 3$$

LAS RECTAS SE CRUZAN

⑥

$$\Pi \begin{cases} \vec{v}_r(1, 1, 1) \\ \vec{v}_s(1, -1, 1) \\ P_S(2, 2, 0) \end{cases} \begin{vmatrix} 1 & 1 & x-2 \\ 1 & -1 & \gamma-2 \\ 1 & 1 & z \end{vmatrix} = 0$$

$$(-z + x - 2 + \gamma - 2) - (-x + 2 + z + \gamma - 2) = 0$$

$$\Pi \equiv 2x - 2z - 4 = 0$$