1.
    - $L_1 = t(1,-1,2) + (1,1,0)$
    - $L_2 = t(-1,1,0) + (2,0,2)$

    $\exists t_1, t_2 \in \Re : (t_1 + 1, -t_1 + 1, 2t_1) = (-t_2 + 2, t_2, 2)$

    - $t_1 + 1 = -t_2 + 2$
    - $-t_1 + 1 = t_2 \overset{\star}{\Rightarrow} 0 = t_2$
    - $2t_1 = 2 \Rightarrow \star : t_1 = 1$

    $P = (2,0,2) : P \in L_1 \wedge P \in L_2$

    $\Rightarrow$ La intersección entre L_1 y L_2 es P ■

2.
    - $P = (1,1,2) \in L_2 \wedge$ $P_2 = (1,1,0) \in L_1 \wedge$ $P_3(3,-1,4) \in L_1$
    - $a = \overrightarrow{PP_2} = (0,0,-2)$
    - $b = \overrightarrow{PP_3} = (2,-2,2)$

    $a \times b = det(\begin{vmatrix} i & j & k \\ 0 & 0 & -2 \\ 2 & -2 & 2 \end{vmatrix}) = -4\widehat{i} - 4\widehat{j} - 0\widehat{k}$

    $\Pi : (-4,-4,0) \cdot (x-1, y-1, z) = 0 \equiv \Pi : -4x + 4 - 4y + 4 = 0 \equiv \Pi : -4x - 4y = -8$ $\Pi : x + y = 2$