DUMITRACHE G. LARISA (Seminar)

GRUPA 141

= Tema 6 =

$(\mathbb{R}^3, (\mathbb{R}^3, g_0), P_0)$

a) EC. PLAN π DETERMINAT DE $O(0,0,0), A(1,0,2), B(1,1,1)$

b) $\Delta_1: \frac{x_1-1}{2} = \frac{x_2+2}{-3} = \frac{x_3-5}{4} = t$

$$\Delta_2: \begin{cases} x_1 = 3t+7 \\ x_2 = 2t+2 \\ x_3 = -2t+1 \end{cases}$$

EC. PLAN π CARE TRECE PRIN Δ_1 ȘI $\pi \parallel \Delta_2$.

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a) $\pi: \begin{vmatrix} x & y & z & 1 \\ 0 & 0 & 0 & 1 \\ 1 & 0 & 2 & 1 \\ 1 & 1 & 1 & 1 \end{vmatrix} = 0$

$$1\cdot(-1)^{2+4}\cdot\begin{vmatrix} x & y & z \\ 1 & 0 & 2 \\ 1 & 1 & 1 \end{vmatrix} = z+2y-2x-y = -2x+y+z = 0 \Rightarrow$$

$\Rightarrow \pi: -2x+y+z=0$

b) $\Delta_1: \begin{cases} x_1 = 2t+1 \\ x_2 = -3t-2 \\ x_3 = 4t+5 \end{cases} \Rightarrow M(1,-2,5) \in \Delta_1$, $u_1 = (2,-3,4)$

$\Delta_2: \frac{x_1-7}{3} = \frac{x_2-2}{2} = \frac{x_3-1}{-2} = t' \Rightarrow u_2 = (3,2,-2)$

$$\pi: \begin{vmatrix} x_1-1 & 2 & 3 \\ x_2+2 & -3 & 2 \\ x_3-5 & 4 & -2 \end{vmatrix} = (x_1-1)\begin{vmatrix} -3 & 2 \\ 4 & -2 \end{vmatrix} - (x_2+2)\begin{vmatrix} 2 & 3 \\ 4 & -2 \end{vmatrix} + (x_3-5)\begin{vmatrix} 2 & 3 \\ -3 & 2 \end{vmatrix} =$$

$$= -2x_1 + 2 + 16x_2 + 32 + 13x_3 - 65 = 0$$

$$\pi: -2x_1 + 16x_2 + 13x_3 - 31 = 0$$