


Lezione di geometria e algebra lineare del 1° Ottobre



$$I_3 \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

$$\mathbb{R}(1) \leftrightarrow \mathbb{R}_1$$

$$\textcircled{5} \quad \mathbb{R}(1) + \mathbb{R}(2) \hookrightarrow \mathbb{R}(1)$$

$$\begin{bmatrix} 0 & 1 & 0 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix} P(1,2)$$

$$\begin{bmatrix} 5 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} T(1;5)$$

$$\begin{bmatrix} 5 & 1 & 0 \\ 0 & 1 & 0 \\ 0 & 1 & 1 \end{bmatrix} \rightarrow (1, 2, 5)$$

$$\begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{vmatrix}$$

$$\begin{vmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{vmatrix} = a_{11} \cdot C_{11} + a_{12} \cdot C_{12} = a_{11} \cdot (-1)^{1+1} \cdot \det(a_{22}) + a_{12} \cdot (-1)^{1+2} \cdot \det(a_{21})$$

$$= a_{11} \cdot (+1) \cdot a_{22} + a_{12} \cdot (-1) \cdot a_{21}$$

$$= a_{11} \cdot a_{22} - a_{12} \cdot a_{21}$$

$$\begin{vmatrix} 0 & 1 & 2 \\ 1 & 1 & 3 \\ 0 & 1 & 4 \end{vmatrix} = a_{11} \cdot C_{11} + a_{12} \cdot C_{12} + a_{13} \cdot C_{13} = 0 \cdot (-1)^2 \cdot \begin{vmatrix} 1 & 3 \\ 1 & 4 \end{vmatrix} + 1 \cdot (-1)^3 \cdot \begin{vmatrix} 1 & 3 \\ 0 & 4 \end{vmatrix} + 2 \cdot (-1)^4 \cdot \begin{vmatrix} 1 & 1 \\ 0 & 1 \end{vmatrix} = 0 - (4 - 0) + 2 \cdot (1 - 0) = -2$$