

SOLVERE IL SISTEMA
$$\begin{cases} 2x - y - z - 4t = 9 \\ 4x - 3z - t = 0 \\ 8x - 2y - 5z - 9t = 18 \end{cases}$$

$$m=3$$

$$n=4$$

$$A = \begin{pmatrix} 2 & -1 & -1 & -4 \\ 4 & 0 & -3 & -1 \\ 8 & -2 & -5 & -9 \end{pmatrix} \Rightarrow 0(3 \times 3) \quad \begin{vmatrix} -1 & -1 \\ 0 & -3 \end{vmatrix} = 3 \neq 0 \quad \kappa(A) = 2$$

$\leftarrow \kappa_3 = \kappa_2 + 2\kappa_1$

SISTEMA
 $\Rightarrow$ AMMETTE
SOLUZIONI

$$A' = \begin{pmatrix} 2 & -1 & -1 & -4 & 9 \\ 4 & 0 & -3 & -1 & 0 \\ 8 & -2 & -5 & -9 & 18 \end{pmatrix} \quad (3 \times 3) \quad \begin{vmatrix} -1 & -1 \\ 0 & -3 \end{vmatrix} \neq 0 \quad \kappa(A') = 2$$

$\leftarrow \kappa_3 = \kappa_2 + 2\kappa_1$ $\det = 0$

$m=4 \quad \kappa=2 \Rightarrow$ ammette $\infty^{m-\kappa} = \infty^2$ soluzioni

$$\begin{cases} 2x - y = 9 + z + 4t \\ 4x = 3z + t \end{cases} \quad D = \begin{vmatrix} 2 & -1 \\ 4 & 0 \end{vmatrix} = 4 \neq 0 \quad \text{CRAMER.}$$

$$x = \frac{D_1}{D} ; \quad y = \frac{D_2}{D} ; \quad z=z \quad t=t$$

$$D_1 = \begin{vmatrix} 9+z+4t & -1 \\ 3z+t & 0 \end{vmatrix} = 3z+t$$

$$D_2 = \begin{vmatrix} 2 & 9+z+4t \\ 4 & 3z+t \end{vmatrix} = 6z+2t-36-4z-16t = 2z-14t-36$$

$$x = \frac{3z+t}{4} ; \quad y = \frac{z-7t-18}{2} ; \quad z=z ; \quad t=t.$$