

$$\textcircled{9} \left\{ \begin{array}{l} x + y + z + t = 4 \\ 2x - y + z - 2t = 0 \Leftrightarrow 2l_1 - l_2 \\ 3x + z - t = 4 \quad 3l_1 - l_3 \\ x - 2y - 3t = -4 \quad l_1 - l_4 \end{array} \right\} \begin{array}{l} x + y + z + t = 4 \\ 3y + z + 4t = 8 \\ 3y + z + 4t = 8 \\ 3y + z + 4t = 8 \end{array}$$

4 équations et 2 eq : Paramètres :

$$\text{On pose } y = a \text{ et } t = b \quad ; \quad z = 8 - 3a - 4b$$

$$\text{et } x = 4 - y - z - t = 4 - a - 8 + 3a + 4b - b = 2a + 3b - 4$$

$$S = \left\{ (2a + 3b - 4, a, 8 - 3a - 4b, b) \mid \forall (a, b) \in \mathbb{R}^2 \right\}$$

$$\textcircled{10} \left\{ \begin{array}{l} x + y + z + t = 4 \\ 2x - y + z - 2t = 0 \Leftrightarrow 2l_1 - l_2 \\ 3x + 2z - t = 4 \quad 3l_1 - l_3 \\ -x + y - 2z + t = -1 \quad l_1 + l_4 \end{array} \right\} \begin{array}{l} x + y + z + t = 4 \\ 3y + z + 4t = 8 \\ 3y + z + 4t = 8 \\ 2y - z + 2t = 3 \end{array}$$

$$(\Rightarrow) \left\{ \begin{array}{l} x + y + z + t = 4 \\ 3y + z + 4t = 8 \\ 5y + 6t = 11 \end{array} \right. \quad \text{4 équations et 3 paramètres}$$