

Exercise 1. Solve the following system of equations:

$$\begin{cases} 2x + 5y - 2z - 3t = 0 \\ x + 2y - 3z + t = 1 \\ x + 4y - 5z + 2t = 3 \end{cases}$$

Exercise 2. Solve the following system of equations:

$$\begin{cases} -2x + y + 6z = 3 \\ x + 4y + 3z = -2 \\ -x + 2y + 5z = 4 \end{cases}$$

Exercise 3. Solve the following system using the matrix elimination method:

$$\begin{cases} -x + 3y - 6z = 3 \\ x - y + 2z = -1 \\ 2x + y + z = 3 \end{cases}.$$

Exercise 4. Find the relationship between the value of parameter p and the number of

solutions of the system using Kronecker-Capelli theorem:
$$\begin{cases} -px + 5y + 3z = 3 \\ 2x - 4y - z = p \\ x + 3py + pz = p \end{cases}.$$