# 1° Tutorato di Algebra

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## Esercizi sui sistemi lineari

Ex.1

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

Ex.2

$$\begin{cases} 2x - 2y + 8z = 5 \\ 2x + 6z = 1 \\ x - 2y + 4z = -1 \\ x + 10z = 0 \end{cases}$$

Ex.3

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

Ex.4

$m \in R$

$$\begin{cases} mx + (m\text{-}1)y = m + 2 \\ (m + 1)x - my = 5m + 3 \end{cases}$$

Ex.5

$\lambda \in \mathbb{R}$

$$\begin{cases} x + 2y + 2w + z = 1 \\ y + 2w + z = 0 \\ \\ x + y + \lambda w = 0 \\ \lambda y + 2\lambda w + \lambda^2 z = 0 \end{cases}$$