

Método de Eliminación

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Sistema Inicial

$$2y + 3z - 4w = 1$$

$$2z + 3w = 4$$

$$2x + 2y - 5z + 2w = 4$$

$$2x - 6z + 9w = 7$$

Sistema Diagonal

$$x + y + -\frac{5}{2}z + w = 2$$

$$y + \frac{3}{2}z - 2w = \frac{1}{2}$$

$$z + \frac{3}{2}w = 2$$

Sistema Reducido

$$\begin{aligned}x + 9w &= \frac{19}{2} \\y - \frac{17}{4}w &= \frac{-5}{2} \\z + \frac{3}{2}w &= 2\end{aligned}$$

Solución

$$x = \frac{19}{2} - 9w$$

$$y = -\frac{5}{2} + \frac{17}{4}w$$

$$z = 2 - \frac{3}{2}w$$

$$w = w$$

Solución Vectorial

$$\begin{pmatrix} x \\ y \\ z \\ w \end{pmatrix} = \begin{pmatrix} \frac{19}{2} \\ \frac{5}{2} \\ 2 \\ 0 \end{pmatrix} + w * \begin{pmatrix} -9 \\ \frac{17}{4} \\ \frac{3}{2} \\ 1 \end{pmatrix}$$