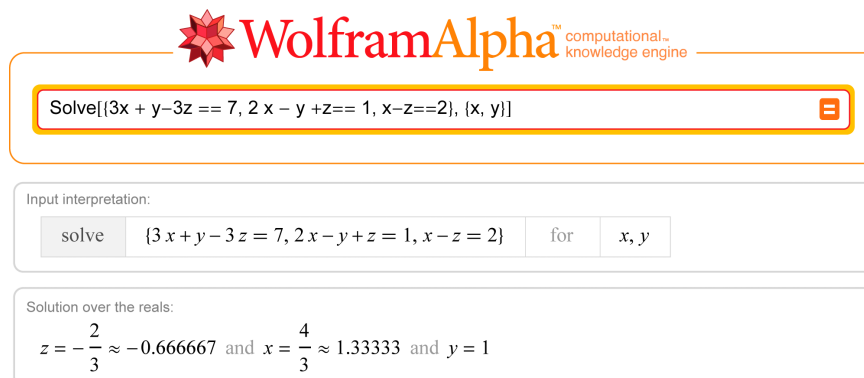


Ayuda al cálculo on-line con WolframAlpha

Para resolver el sistema de ecuaciones

$$\begin{cases} 3x + y - 3z = 7 \\ 2x - y + z = 2 \\ x - z = 2 \end{cases}$$

hay que utilizar el comando $Solve[eqns, vars]$, donde $eqns$ es el conjunto de las ecuaciones y $vars$ el de las variables.



The screenshot shows the WolframAlpha interface. At the top is the WolframAlpha logo with the tagline "computational knowledge engine". Below the logo is an input box containing the command: `Solve[{3x + y - 3z == 7, 2x - y + z == 1, x - z == 2}, {x, y}]`. Below the input box is the "Input interpretation" section, which shows the command broken down into "solve", the equations `{3x + y - 3z = 7, 2x - y + z = 1, x - z = 2}`, "for", and the variables `x, y`. At the bottom is the "Solution over the reals" section, which displays the solution: $z = -\frac{2}{3} \approx -0.666667$ and $x = \frac{4}{3} \approx 1.33333$ and $y = 1$.

Para calcular el rango de la matriz

$$\begin{pmatrix} 3 & 1 & -3 \\ 2 & -1 & 1 \\ 1 & 0 & -1 \end{pmatrix}$$

hay que utilizar el comando $MatrixRank[m]$, donde m es una matriz.



MatrixRank[{{3, 1, -3}, {2, -1, 1}, {1, 0, -1}}]

Input:

MatrixRank $\left[\begin{pmatrix} 3 & 1 & -3 \\ 2 & -1 & 1 \\ 1 & 0 & -1 \end{pmatrix}\right]$

Result:

3