SISTEMAS DE ECUACIONES CON LA REGLA DE CRAMMER

$$\begin{cases} 5x-2y=2 \\ x+2y=2 \end{cases}$$

$$x=\Delta x/\Delta = \frac{\begin{vmatrix} 2 & -2 \\ 2 & 2 \end{vmatrix}}{\begin{vmatrix} 5 & -2 \\ 1 & 2 \end{vmatrix}} = \frac{2.2-2(-2)}{5.2-1(-2)} = \frac{4+4}{10+2} = \frac{8}{12} = \frac{2}{3}$$

$$y=\Delta y/\Delta = \frac{\begin{vmatrix} 5 & 2 \\ 1 & 2 \end{vmatrix}}{12} = \frac{5.2-2.1}{12} = \frac{10-2}{12} = \frac{8}{12} = \frac{2}{3}$$

$$\begin{cases} x+2y=1 \\ -3x+y=-10 \end{cases}$$

$$x=\Delta x/\Delta = \frac{\begin{vmatrix} 1 & 2 \\ -10 & 1 \end{vmatrix}}{\begin{vmatrix} 1 & 2 \\ -3 & 1 \end{vmatrix}} = \frac{1-(-10)2}{1-(-3)2} = \frac{1+20}{1+6} = \frac{21}{7} = 3$$

$$y=\Delta y/\Delta = \frac{\begin{vmatrix} 1 & 1 \\ -3 & -10 \end{vmatrix}}{7} = \frac{-10.1-(-3)1}{7} = \frac{-10+3}{7} = \frac{-7}{7} = -1$$

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7) $$\begin{cases} 6X+Y=3 \\ -4X-Y=8 \end{cases}$$

$a_{11}a_{22}-a_{12}a_{21}$

$$x=\Delta x/\Delta = \frac{\begin{vmatrix} 3 & 1 \\ 8 & -1 \end{vmatrix}}{\begin{vmatrix} 6 & 1 \\ -4 & -1 \end{vmatrix}} = \frac{3.(-1)-8.1}{6.(-1)-(-4).1} = \frac{-3-8}{-6+4} = \frac{-11}{-2} = \frac{11}{2}$$

$$y=\Delta y/\Delta = \frac{\begin{vmatrix} 6 & 3 \\ -4 & 8 \end{vmatrix}}{-2} = \frac{6.8-(-4).3}{-2} = \frac{48+12}{-2} = \frac{60}{-2} = -30$$

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