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$$\begin{cases} 8x + (y^2-1)(y+3) = (y+1)^3 - 2y \\ \left(x+\frac{3}{4}\right)^2 - x\left(x+\frac{1}{4}\right) = 2x + y - 1 \end{cases}$$

$$\begin{cases} 8x + y^3 + 3y^2 - y - 3 = y^3 + 3y^2 + 3y + 1 - 2y \\ x^2 + \frac{3}{2}x + \frac{9}{16} - x^2 - \frac{1}{4}x = 2x + y - 1 \end{cases} \rightsquigarrow 24x + 9 - 4x = 32x + 16y - 16$$

$$\begin{cases} 8x - 2y = 4 \\ -12x - 16y = -25 \end{cases} \rightsquigarrow \boxed{\begin{cases} 4x - y = 2 \\ 12x + 16y = 25 \end{cases}}$$

(3) Riduzione

$$\begin{cases} 12x - 3y = 6 \\ 12x + 16y = 25 \end{cases} \uparrow - \rightsquigarrow 19y = 19 \quad y = 1$$

$4x - 1 = 2 \quad 4x = 3 \rightsquigarrow x = \frac{3}{4} \quad P = \left(\frac{3}{4}; 1\right)$

(2) Confronto

$$\begin{cases} 12x = 6 + 3y \\ 12x = 25 - 16y \end{cases} \rightsquigarrow 6 + 3y = 25 - 16y \quad 19y = 19 \quad y = 1$$

(1) Sostituzione $\begin{cases} y = 4x - 2 \\ 12x + 16(4x - 2) = 25 \end{cases}$

$12x + 64x - 32 = 25 \quad 76x = 57 \quad x = \frac{\cancel{57}^{3}}{\cancel{76}_{4}} = \frac{3}{4}$

(4) Cramer $\begin{cases} 4x - y = 2 \\ 12x + 16y = 25 \end{cases}$

$$D = \begin{pmatrix} 4 & -1 \\ 12 & 16 \end{pmatrix} \qquad \text{Det}(D) = 4 \cdot 16 - (-1)12 = 64 + 12 = 76$$

$$D_x = \begin{pmatrix} 2 & -1 \\ 25 & 16 \end{pmatrix} \qquad \text{Det}(D_x) = 25 + 32 = 57$$

$$D_y = \begin{pmatrix} 4 & 2 \\ 12 & 25 \end{pmatrix} \qquad \text{Det}(D_y) = 100 - 24 = 76$$

$$y = \frac{\text{Det}(D_y)}{\text{Det}(D)} = \frac{76}{76} = 1 \qquad x = \frac{\text{Det}(D_x)}{\text{Det}(D)} = \frac{57}{76} = \frac{3}{4}$$