

$$\begin{cases} 2x_1 + 2x_2 - x_3 = 8 \\ 5x_1 + 5x_2 + 3x_3 = 9 \\ 4x_2 + 2x_3 = 14 \end{cases} = \begin{pmatrix} 2 & 2 & -1 & 8 \\ 5 & 5 & 3 & 9 \\ 0 & 4 & -2 & 14 \end{pmatrix} \cdot F_1 \times \frac{1}{2}$$

$$\begin{pmatrix} 1 & 1 & -\frac{1}{2} & 4 \\ 5 & 5 & 3 & 9 \\ 0 & 4 & -2 & 14 \end{pmatrix} \cdot F_2 - 5 \cdot F_1 \rightarrow \begin{pmatrix} 1 & 1 & -\frac{1}{2} & 4 \\ 0 & 0 & \frac{11}{2} & -11 \\ 0 & 4 & -2 & 14 \end{pmatrix} \cdot F_2 \times \frac{1}{4}$$

$$\begin{pmatrix} 1 & 1 & -\frac{1}{2} & 4 \\ 0 & 1 & -\frac{1}{2} & \frac{7}{2} \\ 0 & 0 & \frac{11}{2} & -11 \end{pmatrix} \cdot F_3 \times \frac{2}{11} \rightarrow \begin{pmatrix} 1 & 1 & -\frac{1}{2} & 4 \\ 0 & 1 & -\frac{1}{2} & \frac{7}{2} \\ 0 & 0 & 1 & -2 \end{pmatrix} \cdot F_2 - \frac{1}{2} \cdot F_3$$

$$\begin{pmatrix} 1 & 1 & -\frac{1}{2} & 4 \\ 0 & 1 & 0 & \frac{5}{2} \\ 0 & 0 & 1 & -2 \end{pmatrix} \cdot F_1 - \left(\frac{1}{2}\right) \cdot F_3 \rightarrow \begin{pmatrix} 1 & 0 & 0 & \frac{1}{2} \\ 0 & 1 & 0 & \frac{5}{2} \\ 0 & 0 & 1 & -2 \end{pmatrix} = \begin{cases} x_1 = \frac{1}{2} \\ x_2 = \frac{5}{2} \\ x_3 = -2 \end{cases}$$

$$\underline{2} \quad A = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}^{-1}$$

$$A_{11} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{12} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A^A = \begin{pmatrix} 02 & 28 & 29 \\ 23 & 23 & 22 \\ 0-1 & 1-1 & 19 \\ 2-3 & 8-3 & 82 \\ 0-1 & 1-1 & 10 \\ 02 & 22 & 20 \end{pmatrix}$$

$$A_{13} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{21} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{22} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{23} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A^{-1} = \frac{1}{|A|} \cdot A^T = \frac{1}{8} \cdot \begin{pmatrix} -4 & 1/4 & 0 \\ 22 & 5/8 & -4 \\ 4 & 0 & 0 \end{pmatrix}$$

$$A^{-1} = \begin{pmatrix} \frac{1}{2} & \frac{1}{4} & 0 \\ -\frac{11}{4} & -\frac{5}{8} & \frac{1}{2} \\ -\frac{1}{2} & \frac{1}{4} & 0 \end{pmatrix}$$

$$A_{31} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{32} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

$$A_{33} = \begin{pmatrix} 1 & 0 & -1 \\ 2 & 0 & 2 \\ 8 & 2 & -3 \end{pmatrix}$$

3

x	y	x.y	x ²
1	7,4	7,4	1
3	6,2	18,6	9
5	4,5	22,5	25
7	3,3	23,1	49
9	1,8	16,2	81
11	0	0	121
Σ	36	23,2	87,8
Σ	36	23,2	286

$$P_o = 6 \quad 3,86$$

$$y = mx + b$$

$$m = \frac{\Sigma xy - \frac{(\Sigma x)(\Sigma y)}{n}}{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}$$

$$m = \frac{87,8 - \frac{36 \cdot 23,2}{6}}{286 - \frac{(36)^2}{6}} = -0,7342857143$$

$$a_0 = 3,86 - (-m) \cdot 6$$

$$a_0 = 3,86 + 4,405714286$$

$$a_0 = 8,265714286$$

$$y = a_0 - m$$

$$y = 8,265714286 - 0,7342857143x$$