

①

$$7 \cdot \begin{bmatrix} 5 & 10 \\ 7 & 12 \\ 11.3 & 5 \\ 25 & 30 \end{bmatrix} + 2 \cdot \begin{bmatrix} 5 & 10 \\ 7 & 12 \\ 11.3 & 5 \\ 25 & 30 \end{bmatrix} = \begin{bmatrix} 35 & 70 \\ 49 & 84 \\ 79.1 & 35 \\ 175 & 210 \end{bmatrix}$$

$$+ \begin{bmatrix} 10 & 20 \\ 14 & 24 \\ 22.6 & 10 \\ 50 & 60 \end{bmatrix} = \begin{bmatrix} 45 & 90 \\ 63 & 108 \\ 101.7 & 45 \\ 225 & 270 \end{bmatrix}$$

②

$$\begin{cases} 3x - 2y + 5z = 7 \\ 7x + 4y - 8z = 3 \\ 5x - 3y - 4z = -12 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 3x - 2y + 5z = 7 \\ 5x - 3y - 4z = -12 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - \frac{26y}{7} + \frac{59z}{7} = \frac{40}{7} \\ 5x - 3y - 4z = -12 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - \frac{26y}{7} + \frac{59z}{7} = \frac{40}{7} \\ 5x - 3y - 4z = -12 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - \frac{26y}{7} + \frac{59z}{7} = \frac{40}{7} \\ 0x - \frac{41y}{7} + \frac{12z}{7} = -\frac{99}{7} \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - \frac{26y}{7} + \frac{59z}{7} = \frac{40}{7} \\ 0x - \frac{41y}{7} + \frac{12z}{7} = -\frac{99}{7} \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - 41y + 12z = -99 \\ 0x - 26y + 59z = 40 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - 41y + 12z = -99 \\ 0x + 0y + \frac{2107z}{41} = \frac{4214}{41} \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - 41y + 12z = -99 \\ 0x + 0y - z = 2 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ 0x - 41y + 0z = -123 \\ z = 2 \end{cases}$$

$$\begin{cases} 7x + 4y - 8z = 3 \\ y = 3 \\ z = 2 \end{cases}$$

$$\begin{cases} 7x + 0y - 8z = -9 \\ y = 3 \\ z = 2 \end{cases}$$

$$x = 1, y = 3, z = 2$$

Система линейная,
уравнения линейные

(2.2)

$$\begin{cases} x^2 + y \cdot x - 9 = 0 \\ x - y/5 = 0 \end{cases}$$

$$\begin{cases} x(x + y) = 9 \\ y = 5x \end{cases}$$

$$\begin{cases} x^2 + 5x^2 = 9 \\ y = 5x \end{cases}$$

$$\begin{cases} 6x^2 = 9 \\ y = 5x \end{cases}$$

$$\begin{cases} x^2 = \frac{3}{2} \\ y = 5x \end{cases}$$

$$x = \pm \sqrt{\frac{3}{2}}$$

$$y = \pm 5\sqrt{\frac{3}{2}}$$

Система
нелинейная,
уравнения
квадратное
и линейное

3.

$$S = 48, \quad P = 28$$

$$x, y = ?$$

$$\begin{cases} x \cdot y = 48 \\ x + y = 28 \end{cases}$$

$$\begin{cases} x \cdot y = 48 \\ y = 28 - x \end{cases}$$

$$\begin{cases} x \cdot (28 - x) = 48 \\ y = 28 - x \end{cases}$$

$$28x - x^2 = 48 = 0$$

$$x = \pm 2(\sqrt{37} \pm 7)$$

$$y = \pm 2(\sqrt{37} \pm 7)$$

$$x_1 \approx 1,83$$

$$y_1 \approx 26,17$$

$$x_2 \approx 26,17$$

$$y_2 \approx 1,83$$