

Systems of equations

№1. Solve a system of two linear equations:

$$1. \quad \begin{cases} x + y = 5 \\ x - y = 1 \end{cases}$$

$$4. \quad \begin{cases} 2x + 2 = x - y \\ 3x + 2y = 0 \end{cases}$$

$$2. \quad \begin{cases} x + 3y = 11 \\ 3(x - 1) - 5y = -68 \end{cases}$$

$$5. \quad \begin{cases} \frac{1}{3}x + \frac{7}{8}y = 8 \\ 14x - 5y = 2 \end{cases}$$

$$3. \quad \begin{cases} 2x + 3y = 5 \\ 4x + 6y = 11 \end{cases}$$

$$6. \quad \begin{cases} 3(2x - 5) + 2y = -41 \\ \frac{x - 3y}{9} - y = 5 \end{cases}$$

№2. Solve a system of three linear equations:

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

№3. Find $a + b + c$ considering $a + 2b = 3$, $b + 2c = 4$, $c + 2a = 5$.

№4. Solve a system of a linear and a quadratic equation:

$$1. \quad \begin{cases} x - y = 27 \\ x^2 - y = 0 \end{cases}$$

$$2. \quad \begin{cases} x - 2y + xy = 27 \\ x - y - 3 = 0 \end{cases}$$

№5. Solve a system of two quadratic equations:

$$1. \quad \begin{cases} y = 2 - 5x - 5x^2 \\ y = 3x^2 + 7x + 2 \end{cases}$$

$$2. \quad \begin{cases} x^2 + y^2 + 2x = 9 \\ x^2 + y^2 - 6x = 11 \end{cases}$$