

СИСТЕМЫ УРАВНЕНИЙ

Решите систему уравнений (1-52):

1)
$$\begin{cases} 3x + y = 5 \\ \frac{x+2}{5} + \frac{y}{2} = -1 \end{cases}$$

3)
$$\begin{cases} \frac{x}{3} - \frac{y-2x}{5} = 1\frac{1}{3} \\ \frac{y}{2} + \frac{5}{6} = \frac{x+y}{3} \end{cases}$$

5)
$$\begin{cases} 4x^2 - y = 2 \\ 3x - 2y = -1 \end{cases}$$

7)
$$\begin{cases} x - y = -5 \\ x^2 - 2xy - y^2 = 17 \end{cases}$$

9)
$$\begin{cases} x^2 + 3x + y^2 = 2 \\ x^2 + 3x - y^2 = -6 \end{cases}$$

11)
$$\begin{cases} 3x - y = 2 \\ x^2 - 4x + 8 = y \end{cases}$$

13)
$$\begin{cases} (2x+3)^2 = 5y \\ (3x+2)^2 = 5y \end{cases}$$

15)
$$\begin{cases} (x-4)(y-6) = 0 \\ \frac{y-4}{x+y-8} = 2 \end{cases}$$

17)
$$\begin{cases} 3x^2 + y = 6 \\ 4x^2 - y = 1 \end{cases}$$

19)
$$\begin{cases} 2x^2 + 3y^2 = 11 \\ 4x^2 + 6y^2 = 11x \end{cases}$$

21)
$$\begin{cases} (x+6y)^2 = 7y \\ (x+6y)^2 = 7x \end{cases}$$

23)
$$\begin{cases} x^2 + y^2 = 40 \\ xy = -12 \end{cases}$$

2)
$$\begin{cases} x - y = 2 \\ \frac{1}{x} - \frac{1}{y} = -\frac{2}{3} \end{cases}$$

4)
$$\begin{cases} \frac{3x}{4} - \frac{y-3x}{2} = -6 \\ \frac{y-x}{3} - \frac{1}{6} = \frac{y}{2} \end{cases}$$

6)
$$\begin{cases} 4x + 3y = -1 \\ 2x^2 - y = 11 \end{cases}$$

8)
$$\begin{cases} x + y = 2 \\ 2x^2 + xy + y^2 = 8 \end{cases}$$

10)
$$\begin{cases} 2y^2 - 4y - x^2 = -3 \\ 2y^2 - 4y + x^2 = -1 \end{cases}$$

12)
$$\begin{cases} 2x + y = 1 \\ x^2 - 11x + 14 = 2y \end{cases}$$

14)
$$\begin{cases} (2x+4)^2 = 3y \\ (4x+2)^2 = 3y \end{cases}$$

16)
$$\begin{cases} (x-6)(y-5) = 0 \\ \frac{y-2}{x+y-8} = 3 \end{cases}$$

18)
$$\begin{cases} 3x^2 + y = 4 \\ 2x^2 - y = 1 \end{cases}$$

20)
$$\begin{cases} 2x^2 + 2y^2 = 24 \\ 4x^2 + 4y^2 = 24x \end{cases}$$

22)
$$\begin{cases} (2x+6y)^2 = 8y \\ (2x+6y)^2 = 8x \end{cases}$$

24)
$$\begin{cases} xy = 8 \\ x^2 + y^2 = 20 \end{cases}$$

$$25) \begin{cases} 3x^2 - 2x = y \\ 3x - 2 = y \end{cases}$$

$$27) \begin{cases} x^2 = 7y + 2 \\ x^2 + 2 = 7y + y^2 \end{cases}$$

$$29) \begin{cases} (x+y)^2 = 2y \\ (x+y)^2 = 2x \end{cases}$$

$$31) \begin{cases} \frac{2}{x} + \frac{1}{y} = 4 \\ \frac{1}{x} - \frac{3}{y} = 9 \end{cases}$$

$$33) \begin{cases} \frac{6}{x-y} - \frac{8}{x+y} = -2 \\ \frac{9}{x-y} + \frac{10}{x+y} = 8 \end{cases}$$

$$35) \begin{cases} x + y - xy = -14 \\ x + y + xy = 2 \end{cases}$$

$$37) \begin{cases} 5(x+y) + 2xy = -19 \\ x + 3xy + y = -35 \end{cases}$$

$$39) \begin{cases} xy - x^2 = -18 \\ xy + x^2 = 14 \end{cases}$$

$$41) \begin{cases} x^2 + y^2 = 5 \\ x^4 - y^4 = 15 \end{cases}$$

$$43) \begin{cases} x + y = 7 \\ (x^2 - y^2)(x - y) = 175 \end{cases}$$

$$45) \begin{cases} 2x + 3y = 10 \\ \frac{x}{y} + \frac{y}{x} = 2 \end{cases}$$

$$47) \begin{cases} x^4 + y^4 = 82 \\ xy = 3 \end{cases}$$

$$49) \begin{cases} x^2 + y^2 + xy = 7 \\ x + y + xy = 5 \end{cases}$$

$$26) \begin{cases} 9x^2 - 14x = y \\ 9x - 14 = y \end{cases}$$

$$28) \begin{cases} x^2 = 6y + 7 \\ x^2 + 2 = 6y + y^2 \end{cases}$$

$$30) \begin{cases} (2x-y)^2 = -3y \\ (2x-y)^2 = -3x \end{cases}$$

$$32) \begin{cases} \frac{1}{x} + \frac{4}{y} = 4 \\ \frac{1}{y} - \frac{2}{x} = 10 \end{cases}$$

$$34) \begin{cases} \frac{4}{x-y} + \frac{12}{x+y} = 3 \\ \frac{8}{x-y} - \frac{18}{x+y} = -1 \end{cases}$$

$$36) \begin{cases} x - y + xy = -11 \\ x - y - xy = 1 \end{cases}$$

$$38) \begin{cases} 4(x-y) - 3xy = -14 \\ 7x + 4xy - 7y = 31 \end{cases}$$

$$40) \begin{cases} y^2 + xy = 3 \\ y^2 - xy = 5 \end{cases}$$

$$42) \begin{cases} x^4 - y^4 = 5 \\ x^2 - y^2 = 2 \end{cases}$$

$$44) \begin{cases} x - y = 5 \\ (x+y)(x^2 - y^2) = 245 \end{cases}$$

$$46) \begin{cases} 3x - 2y = 15 \\ \frac{x}{y} + \frac{y}{x} + 2 = 0 \end{cases}$$

$$48) \begin{cases} x^4 + y^4 = 32 \\ x^2 + y^2 = 8 \end{cases}$$

$$50) \begin{cases} x^2 + y^2 - xy = 3 \\ x + y - xy = 1 \end{cases}$$

$$51) \begin{cases} x^2 + \frac{1}{2}x - 5y = 8 \\ y^2 + x + 2x^2 = 40 \end{cases}$$

$$52) \begin{cases} x^2 - y + 2y^2 = 29 \\ y^2 - 0,5y + x = 15 \end{cases}$$

Найдите решения уравнения (53-56):

$$53) (x + 2y)^2 + (x - y - 1)^2 = 0$$

$$54) (y - 2x)^2 + (x + y - 2)^2 = 0$$

$$55) (x - y^2)^2 + (x^2 - x)^2 = 0$$

$$56) (4y - y^2)^2 + (x^2 - y)^2 = 0$$

ОТВЕТЫ

- 1) (3; -4). 2) (3; 1), (-1; -3). 3) (1; -3). 4) (-2; 3). 5) (1; 2), $\left(-\frac{5}{8}; -\frac{7}{16}\right)$. 6) (2; -3), $\left(-2\frac{2}{3}; 3\frac{2}{9}\right)$. 7) (-7; -2), (-3; 2). 8) (2; 0), (-1; 3). 9) (-2; -2), (-2; 2), (-1; -2), (-1; 2). 10) (1; 1), (-1; 1). 11) (2; 4), (5; 13). 12) (3; -5), (4; -7). 13) (1; 5), $\left(-1; \frac{1}{5}\right)$. 14) (1; 12), $\left(-1; \frac{4}{3}\right)$. 15) (3; 6). 16) (4; 5). 17) (-1; 3), (1; 3). 18) (1; 1), (-1; 1). 19) (2; -1), (2; 1). 20) $(2; -2\sqrt{2})$, $(2; 2\sqrt{2})$. 21) (0; 0), $\left(\frac{1}{7}; \frac{1}{7}\right)$. 22) (0; 0), $\left(\frac{1}{8}; \frac{1}{8}\right)$. 23) (6; -2), (-6; 2), (-2; 6), (2; -6). 24) (4; 2), (-4; -2), (-2; -4), (2; 4). 25) $\left(\frac{2}{3}; 0\right)$, (1; 1). 26) $\left(\frac{14}{9}; 0\right)$, (1; -5). 27) (-4; 2), (4; 2). 28) (-5; 3), (5; 3). 29) (0; 0), $\left(\frac{1}{2}; \frac{1}{2}\right)$. 30) (0; 0), (-3; -3). 31) $\left(\frac{1}{3}; -\frac{1}{2}\right)$. 32) $\left(-\frac{1}{4}; \frac{1}{2}\right)$. 33) $\left(\frac{5}{2}; -\frac{1}{2}\right)$. 34) (5; 1). 35) (-4; -2), (-2; -4). 36) (-3; 2), (-2; 3). 37) (4; -3), (-3; 4). 38) (3; 2), (-2; -3). 39) $\left(4; -\frac{1}{2}\right)$, $\left(-4; \frac{1}{2}\right)$. 40) $\left(-\frac{1}{2}; 2\right)$, $\left(\frac{1}{2}; -2\right)$. 41) (2; 1), (-2; 1), (2; -1), (-2; -1). 42) $\left(\frac{3}{2}; \frac{1}{2}\right)$, $\left(\frac{3}{2}; -\frac{1}{2}\right)$, $\left(-\frac{3}{2}; \frac{1}{2}\right)$, $\left(-\frac{3}{2}; -\frac{1}{2}\right)$. 43) (6; 1), (1; 6). 44) (6; 1), (-1; -6). 45) (2; 2). 46) (3; -3). 47) (-3; -1), (1; 3), (3; 1), (-1; -3). 48) (2; 2), (-2; -2), (-2; 2), (2; -2). 49) (1; 2), (2; 1). 50) (1; -1), (-1; 1).

51) $\left(-\frac{9}{2}; 2\right), (4; 2)$. **52)** $(1; 4), \left(1; -\frac{7}{2}\right)$. **53)** $\left(\frac{2}{3}; -\frac{1}{3}\right)$. **54)** $\left(\frac{2}{3}; \frac{4}{3}\right)$. **55)** $(0; 0), (1; 1), (1; -1)$. **56)** $(0; 0), (2; 4), (-2; 4)$.