

Для решения нижеизложенных уравнений да помогут

вам 2-е великие формулы

$$(x + y)^2 = x^2 + 2xy + y^2$$

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

1) $x^2 + 2 * x + 1 = 0$

2) $x^2 - 6 * x + 9 = 0$

3) $x^2 - 10 * x + 25 = 0$

4) $x^2 - 10 * x + 16 = 0$

5) $x^2 - 10 * x + 34 = 0$

6) $x^2 - 10 * x + 10 = 0$

7) $4x^2 - 12 * x + 9 = 0$

8) $25x^2 - 10 * x + 10 = 0$

9) $16x^2 - 24 * x + 10 = 0$

10) $2x^2 - 8 * x + 8 = 0$

11) $2x^2 - 12 * x + 18 = 0$

12) $27x^2 - 18 * x + 12 = 0$

13) $4x^2 - 24 * x + 36 = 0$

14) $4x^2 - 24 * x + 20 = 0$

15) $3x^2 - 12 * x - 4 = 0$

16) $3x^2 - 15 * x - 4 = 0$

17) $3x^2 - 15 * x - 27 = 0$

18) (!!!)(*) $a * x^2 + b * x + c = 0$

6) $x^2 - 10x + 25 + 10 - 25 = 0$

$(x-5)^2 - 25 + 10 = 0$

$(x-5)^2 - 15 = 0$

$(x-5)^2 - (\sqrt{15})^2 = 0$

$(x-5+\sqrt{15})(x-5-\sqrt{15}) = 0$

$x-5+\sqrt{15} = 0$ or $x-5-\sqrt{15} = 0$

$x = 5 - \sqrt{15}$ $x = 5 + \sqrt{15}$

8) $25x^2 - 10x + 10 = 0$

$(5x)^2 - 2 * 5x * 1 + 10 = 0$

$(5x)^2 - 2 * 5x * 1 + 1 + 10 - 1 = 0$

$(5x-1)^2 - 1 + 10 = 0$

$(5x-1)^2 + 3^2 = 0$

НЕТ РЕШЕНИЯ

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

2) $(x-3)^2 = 0$ $x = 3$

3) $(x-5)^2 = 0$ $x = 5$

4) $x^2 - 10x + 25 + 16 - 25 = 0$

$(x-5)^2 - 25 + 16 = 0$

$(x-5)^2 - 9 = 0$

$(x-5)^2 - (3)^2 = 0$

$(x-5+3)(x-5-3) = 0$

$(x-2)(x-8) = 0$

$x-2 = 0$ или $x-8 = 0$

$x = 2$ $x = 8$

5) $x^2 - 10x + 25 + 34 - 25 = 0$

$(x-5)^2 - 25 + 34 = 0$

$(x-5)^2 + 9 = 0$

$(x-5)^2 + 3^2 = 0$

НЕТ РЕШЕНИЯ

9) $16x^2 - 24x + 10 = 0$

$(4x)^2 - 2 * 4x * 3 + 10 = 0$

$(4x)^2 - 2 * 4x * 3 + 3^2 + 10 - 3^2 = 0$

$(4x-3)^2 + 10 - 3^2 = 0$

$(4x-3)^2 + 1 = 0$

$(4x-3)^2 = -1$

НЕТ РЕШЕНИЯ

12) $27x^2 - 18x + 12 = 0$

$9x^2 - 6x + 4 = 0$

$(3x)^2 - 2 * 3x * 1 + 1 + 4 - 1 = 0$

$(3x-1)^2 + 4 - 1 = 0$

$(3x-1)^2 + 3 = 0$

$(3x-1)^2 = -3$

НЕТ РЕШЕНИЯ

7) $4x^2 - 12x + 9 = 0$

$4x^2 - 12x + 3^2 = 0$

$(2x)^2 - 2 * 2x * 3 + 3^2 = 0$

$(2x-3)^2 = 0$

$2x-3 = 0$

$x = 1,5$

10) $2x^2 - 8x + 8 = 0$

$x^2 - 4x + 4 = 0$

$x^2 - 2 * x * 2 + 4 = 0$

$(x-2)^2 = 0$

$x = 2$

11) $2x^2 - 12x + 18 = 0$

$x^2 - 6x + 9 = 0$

$x^2 - 2 * x * 3 + 3^2 = 0$

$(x-3)^2 = 0$

$x = 3$

13) $4x^2 - 24x + 36 = 0$

$x^2 - 6x + 9 = 0$

$x^2 - 2 * x * 3 + 3^2 = 0$

$(x-3)^2 = 0$

$x = 3$

14) $4x^2 - 24x + 20 = 0$

$x^2 - 6x + 5 = 0$

$x^2 - 2 * x * 3 + 3^2 + 5 - 3^2 = 0$

$(x-3)^2 + 5 - 3^2 = 0$

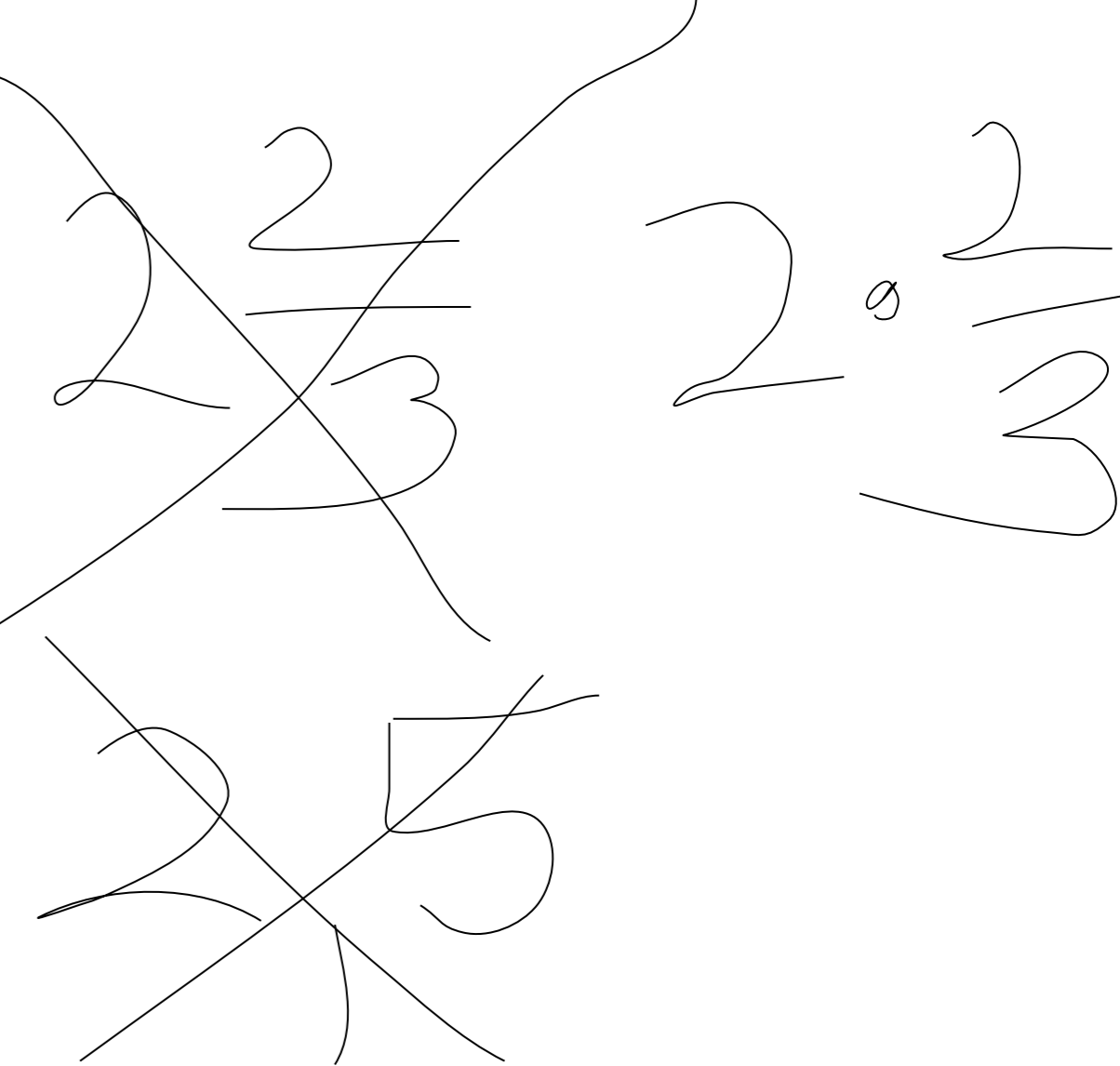
$(x-3)^2 - 4 = 0$

$(x-3)^2 - 2^2 = 0$

$(x-3+2)(x-3-2) = 0$

$(x-1)(x-5) = 0$

$x = 1$ или $x = 5$



15) $3x^2 - 12x - 4 = 0$

$x^2 - 4x - 4/3 = 0$

$x^2 - 2 * x * 2 + 2^2 + 4/3 - 2^2 = 0$

$(x-2)^2 + 4/3 - 2^2 = 0$

$(x-2)^2 + 1\frac{1}{3} - 4 = 0$

$(x-2)^2 - 8/3 = 0$

$(x-2)^2 - v(8/3)^2 = 0$

$(x-2-v(8/3))(x-2+v(8/3)) = 0$

$x = v(8/3) + 2$ или $x = 2 - v(8/3)$

16) $3x^2 - 15 * x - 4 = 0$

$x^2 - 5x - 4/3 = 0$

$x^2 - 2 * x * (5/2) + (5/2)^2 - 4/3 - (5/2)^2 = 0$

$(x-5/2)^2 - 4/3 - (5/2)^2 = 0$

$(x-5/2)^2 - 4/3 - 25/4 = 0$

$(x-5/2)^2 - 16/12 - 75/12 = 0$

$(x-5/2)^2 - 91/12 = 0$

$(x-5/2)^2 - v(91/12)^2 = 0$

$(x-5/2-v(91/12))(x-5/2+v(91/12)) = 0$

$x = v(91/12) + 5/2$ или $x = 5/2 - v(91/12)$