

$$2) (2x-5)/(3x+1) + (21x+7)/(2x-5) = 8$$

$$(2x-5)/(3x+1) + (21x+7)/(2x-5) - 8 = 0$$

$$(2x-5)(2x-5)/(3x+1)(2x-5) + (21x+7)(3x+1)/(2x-5)(3x+1) - 8(3x+1)(2x-5)/(3x+1)(2x-5) = 0$$

$$((2x-5)(2x-5) + (21x+7)(3x+1) - 8(3x+1)(2x-5))/(3x+1)(2x-5) = 0$$

$$(4x^2 - 10x - 10x + 25 + 63x^2 + 21x + 21x + 7 - 48x^2 - 16x + 120x + 40)/(3x+1)(2x-5) = 0$$

$$(19x^2 + 126x + 72)/(3x+1)(2x-5) = 0$$

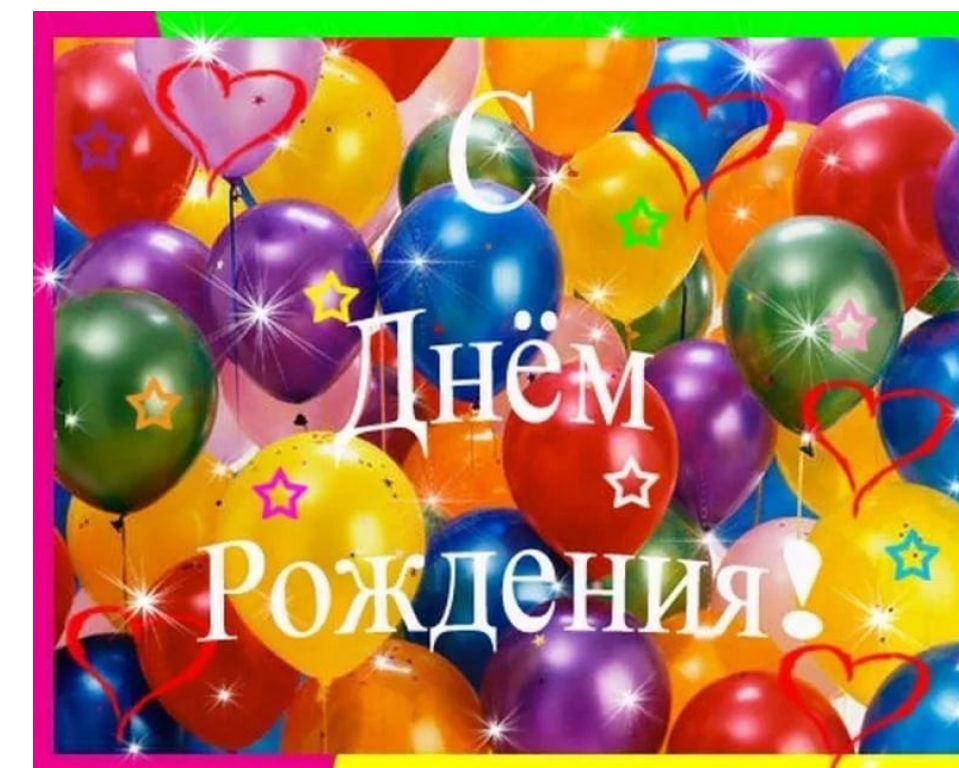
$$19x^2 + 126x + 72 = 0 \quad (3x+1)(2x-5) \neq 0$$

$$D/4 = 63^2 - 19 \cdot 72 = 2601 \quad x_1 = -1/3 \quad x_2 = 5/2$$

$$x_1 = (-63 + 51)/19 = -12/19$$

$$x_2 = (-63 - 51)/19 = -6$$

Отв: -12/19; -6



$$2.5) (x^2 - 2x)/(4x - 3) + 5 = (16x - 12)/(2x - x^2)$$

$$(x^2 - 2x)/(4x - 3) + 5 - (16x - 12)/(2x - x^2) = 0$$

$$((x^2 - 2x)(2x - x^2) + 5(2x - x^2)(4x - 3) - (16x - 12)(4x - 3))/(4x - 3)(2x - x^2) = 0$$

$$((2x^3 - 4x^2 - x^4 + 2x^3) + (40x^2 - 20x^3 - 30x + 15x^2) - (64x^2 - 48x - 48x + 36))/(4x - 3)(2x - x^2) = 0$$

$$(2x^3 - 4x^2 - x^4 + 2x^3 + 40x^2 - 20x^3 - 30x + 15x^2 - 64x^2 + 48x + 48x - 36)/(4x - 3)(2x - x^2) = 0$$

$$(-x^4 - 16x^3 - 13x^2 + 66x - 36)/(4x - 3)(2x - x^2) = 0$$

$$-x^4 - 16x^3 - 13x^2 + 66x - 36 = 0 \quad x_1 = 3/4 \quad 2x - x^2 \neq 0$$

$$-81 + 432 - 117 - 54 + 12 \quad x(2-x) \neq 0 \quad x_1 \neq 0 \quad x_2 = 2$$

$$(x^2 - 2x)/(4x - 3) + 5 = (16x - 12)/(2x - x^2)$$

$$(x^2 - 2x)/(4x - 3) + 5 - (16x - 12)/(2x - x^2) = 0$$

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

$$a = x^2 - 2x \quad b = (4x - 3)$$

$$a/b + 4b/a + 5 = 0$$

$$(a^2 + 4b^2 + 5ab)/ab = 0$$

$$a^2 + 4b^2 + 5ab = 0 \text{ однородные}$$

$$a^2 + 4b^2 + 5ab = 0/a^2$$

$$1 + 4b^2/a^2 + 5b/a = 0$$

$$v = b/a$$

$$1 + 4v^2 + 5v = 0$$

$$D = 25 - 16 = 9$$

$$v_1 = (-5 + 3)/8 = -1/4$$

$$v_2 = (-5 - 3)/8 = -1$$

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

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

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

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

$$(16x - 12 + x^2 - 2x)/4(x^2 - 2x) = 0$$

$$(14x + x^2 - 12)/4(x^2 - 2x) = 0$$

$$x^2 + 14x - 12 = 0$$

$$D/4 = 49 + 12 = 61$$

$$x_1 = -7 + \sqrt{61}$$

$$x_2 = -7 - \sqrt{61}$$

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

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

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

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

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

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

$$x_3 = -3$$

$$x_4 = 1$$

ответ: -7 + \sqrt{61}; -7 - \sqrt{61}; -3; 1