

$$7) \left\{ \frac{x+1}{x-2} \right\}^2 + \frac{x+1}{x-4} = 12 * \left\{ \frac{x-2}{x-4} \right\}^2$$

$$\left\{ \frac{x+1}{x-2} \right\}^2 + \frac{x+1}{x-4} - 12 \left\{ \frac{x-2}{x-4} \right\}^2 = 0 \quad | : \left\{ \frac{x-2}{x-4} \right\}^2$$

$$\left\{ \frac{x+1}{x-2} \right\}^2 / \left\{ \frac{x-2}{x-4} \right\}^2 + \left(\frac{x+1}{x-4} \right) / \left\{ \frac{x-2}{x-4} \right\}^2 - 12 = 0$$

$$(x+1)^2 (x-4)^2 / (x-2)^4 + (x+1)(x-4) / (x-2)^2 - 12 = 0$$

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

$$y^2 + y - 12 = 0$$

$$y_1 = -4$$

$$y_2 = 3$$

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

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

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

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

$$[-19x + 5x^2 + 12] / (x-2)^2 = 0$$

$$5x^2 - 19x + 12 = 0$$

$$D = 361 - 12 * 20 = 361 - 240 = 121$$

$$x_1 = (19 + 11) / 10 = 3$$

$$x_2 = (19 - 11) / 10 = 8 / 10 = \frac{4}{5}$$

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

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

$$[-2x^2 + 9x - 16] / (x-2)^2 = 0$$

$$2x^2 - 9x + 16 = 0$$

$$D = 81 - 8 * 16 = 81 - 128 = -47$$

корней нет

Ответ: 3; 4/5

$$(a/b)^2 + a/c - 12(d/c)^2 = 0$$

$$a^2/b^2 + a/c - 12(d^2/c^2) = 0$$

$$a^2/b^2 + a/c - (12d^2)/c^2 = 0$$

$$a^2c^2/b^2c^2 + abc/b^2c^2 - (12d^2)b^2/b^2c^2 = 0$$

$$[a^2c^2 + abc - (12d^2)b^2] / b^2c^2 = 0$$

