

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

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

$$\frac{x+1}{x-2} = z$$

$$z^2 + z = 12$$

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

$$z_1 = -4$$

$$z_2 = 3$$

$$\frac{x+1}{x-2} + 4 = 0$$

$$\frac{x+1}{x-2} - 3 = 0$$

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

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

$$1 \cdot \frac{x^2 - 3x - 4 + 4x^2 - 16x + 16}{(x-2)^2} = 0$$

$$2 \cdot \frac{x^2 - 3x - 4 - 3x^2 + 12x - 12}{(x-2)^2} = 0$$

$$1 \cdot \frac{5x^2 - 19x + 12}{(x-2)^2} = 0$$

$$2 \cdot \frac{-2x^2 + 9x - 16}{(x-2)^2} = 0$$

$$1) 5x^2 - 19x + 12 = 0$$

$$D = 361 - 240 = 121$$

$$x_1 = \frac{19 - 11}{10} = \frac{4}{5}$$

$$x_2 = \frac{19 + 11}{10} = 3$$

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

$$D = 81 - 128 = -47$$

Ответ:  $\frac{4}{5}; 3$

