

$$\frac{4x}{x+5} - \frac{x}{x-1} = 3$$

ОДЗ.

$$\begin{cases} x+5 \neq 0 & (1) \\ x-1 \neq 0 & (2) \end{cases}$$

$$\frac{4x}{x+5} - \frac{x}{x-1} - 3 = 0$$

$$-3 + \frac{4x}{x+5} - \frac{x}{x-1} = 0$$

$$-3 + \frac{4x(x-1)}{(x+5)(x-1)} - \frac{x(x+5)}{(x-1)(x+5)} = 0$$

$$-3 + \frac{4x(x-1) - x(x+5)}{(x+5)(x-1)} = 0$$

$$-3 + \frac{4x^2 - 4x - x^2 - 5x}{(x+5)(x-1)} = 0$$

$$-3 + \frac{3x^2 - 9x}{(x+5)(x-1)} = 0$$

$$-\frac{3(x+5)(x-1)}{(x+5)(x-1)} + \frac{3x^2 - 9x}{(x+5)(x-1)} = 0$$

$$\frac{-3(x+5)(x-1) + (3x^2 - 9x)}{(x+5)(x-1)} = 0$$

$$\frac{-(3x+15)(x-1) + (3x^2 - 9x)}{(x+5)(x-1)} = 0$$

$$\frac{-(3x^2 - 3x + 15x - 15) + (3x^2 - 9x)}{(x+5)(x-1)} = 0$$

$$\frac{-(3x^2 + 12x - 15) + (3x^2 - 9x)}{(x+5)(x-1)} = 0$$

$$\frac{-3x^2 - 12x + 15 + 3x^2 - 9x}{(x+5)(x-1)} = 0$$

$$\frac{-21x+15}{(x+5)(x-1)}=0$$

$$-\frac{3(7x-5)}{(x+5)(x-1)}=0$$

$$\frac{3(7x-5)}{(x+5)(x-1)}=0$$

$$7x-5=0$$

$$7x=5$$

$$x=5:7$$

$$x=\frac{5}{7}$$

Ответ: $x=\frac{5}{7}$.