

$$\Rightarrow 3x - 4x = 6x + 12 \quad | -6x$$

$$\Rightarrow 3x - 4x - 6x = 12$$

$$\Rightarrow -7x = 12 \quad | :(-7)$$

$$\Rightarrow x = \frac{12}{-7} \quad \Rightarrow \underline{x = -\frac{12}{7}}$$

$$\text{IIA1:} \quad \frac{x}{4} - \frac{x}{3} = \frac{x}{2} + 1 \quad | \cdot 12$$

$$\Rightarrow 12 \cdot \left(\frac{x}{4} - \frac{x}{3} \right) = 12 \left(\frac{x}{2} + 1 \right)$$

$$\Rightarrow \overset{3}{12} \cdot \frac{x}{4} - \overset{4}{12} \cdot \frac{x}{3} = \overset{6}{12} \cdot \frac{x}{2} + 12 \cdot 1$$

$$\Rightarrow 3x - 4x = 6x + 12$$

⋮

$$\Rightarrow \underline{x = -\frac{12}{7}}$$

Exm. $6x = (2 + 3x)2$ $\Rightarrow 6x = 4 + 6x$ $\Rightarrow 6x - 6x = 4$
 $\Rightarrow 0 = 4$ epätön ei ratk

Exm. $3(2x-3) - 2(3x-4) = -1$

$$\Rightarrow 6x - 9 - 6x + 8 = -1$$

$$\Rightarrow 6x - 6x = -1 + 9 - 8$$

$$\Rightarrow 0 = 0 \quad \text{tosi} \quad \Rightarrow \underline{\text{kaikki luvut } x \text{ toteuttavat yhtälön}}$$