

Ex 2.5.13

$$c) \quad \frac{2-x}{x+1} - \frac{5}{3} = \frac{2x+1}{3-2x} \quad \left| \cdot 3(x+1)(3-2x) \text{ v.i.: } -1 \text{ et } \frac{3}{2} \right.$$

$$3(2-x)(3-2x) - 5(x+1)(3-2x) = 3(2x+1)(x+1)$$

$$3(6 - \underbrace{4x - 3x}_{-7x} + 2x^2) - 5(\underbrace{3x - 2x^2}_{+x} + 3 - 2x) = 3(2x^2 + \underbrace{2x + x + 1}_{3x})$$

$$18 - 21x + 6x^2 + 10x^2 - 15 - 5x = 6x^2 + 9x + 3 \quad \left\{ \begin{array}{l} -6x^2 - 9x - 3 \end{array} \right.$$

$$10x^2 - 35x = 0$$

$$5x(2x - 7) = 0$$

$$\begin{array}{cc} \downarrow & \downarrow \\ 0 \checkmark & \frac{7}{2} \checkmark \end{array}$$

$$\Rightarrow S = \left\{ 0, \frac{7}{2} \right\}$$

$$a) \quad \frac{1}{1} = \frac{3x}{(x+3)(x-3)} - \frac{x}{2(x-3)} \quad \left| \cdot 2(x+3)(x-3) \quad \text{u.i. : } \pm 3 \right.$$

$$2(x+3)(x-3) = 6x - 2x(x+3)$$

...

$$d) \quad \frac{10x-2}{3(2x-1)} + \frac{3x+5}{(2x+1)(2x-1)} = \frac{x-1}{2x+1} \quad \left| 3(2x-1)(2x+1) \quad \text{u.i. : } \pm \frac{1}{2} \right.$$

$$(10x-2)(2x+1) + 3(3x+5) = 3 \underbrace{(x-1)(2x-1)}_{2x^2-3x+1}$$

$$20x^2 + 10x - 4x - 2 + 9x + 15 = 6x^2 - 9x + 3$$

$$14x^2 + 24x + 10 = 0 \quad | :2$$

$$7x^2 + 12x + 5 = 0 \quad \Delta = 12^2 - 4 \cdot 7 \cdot 5 = 4$$

$$x_{1,2} = \frac{-12 \pm 2}{14} = \begin{cases} -1 & \checkmark \\ -\frac{5}{7} & \checkmark \end{cases} \Rightarrow S = \left\{ -1; -\frac{5}{7} \right\}$$