

$$\frac{x-1}{2x+1} - \frac{3x+9}{2x+4x^2} + \frac{1+3x}{2x} = 0 \quad \text{C.E.}$$

$$\frac{x-1}{2x+1} - \frac{3x+9}{2x(1+2x)} + \frac{1+3x}{2x} = 0 \quad \begin{matrix} x \neq 0 \\ x \neq -\frac{1}{2} \end{matrix}$$

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

$$2x^2 - 2x - 3x - 9 + 2x + 6x^2 + 1 + 3x = 0$$

$$8x^2 - 8 = 0$$

$$8(x^2 - 1) = 0$$

$$8(x+1)(x-1) = 0$$

$$x = -1 \vee x = 1$$

$$S = \{-1, 1\}$$

$$27 + 8x^3 = 0$$

$$a^3 + b^3 = (a+b)(a^2 + b^2 - ab)$$

$$(3+2x)(9+4x^2-6x) = 0$$

$$3+2x=0 \vee 4x^2-6x+9=0$$

$$\Downarrow$$

$$x = -\frac{3}{2}$$

$$\Downarrow \Delta < 0$$

$$x_{1,2} \notin \mathbb{R}$$

$$S = \left\{-\frac{3}{2}\right\} \text{ e } 2 \text{ soluzioni } \notin \mathbb{R}$$

$$3x^4 - 7x^2 + 4 = 0$$

$$4x^4 - 5x^2 + 1 = 0$$

	$x^4$	$x^3$	$x^2$	$x$	$\text{c.m.}$
	4	0	-5	0	1
1		4	4	-1	-1
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	4	4	-1	-1	0
	$x^3$	$x^2$	$x$	$\text{c.m.}$	

$$\boxed{4x^4 - 5x^2 + 1}$$

Si può dividere per  $\boxed{x-1}$

perché sostituendo  $x=1$

a  $4x^4 - 5x^2 + 1$  si ottiene 0

$$4 - 5 + 1 = 0$$

quindi si scompone

$$(4x^4 - 5x^2 + 1) = (x-1)(4x^3 + 4x^2 - x - 1)$$