

$$\frac{3x}{x-2} + \frac{4}{x+3} - 2 = \frac{2-16x}{6-x^2-x}$$

$$\frac{3x}{x-2} + \frac{4}{x+3} - 2 = \frac{2-16x}{-x^2-x+6}$$

$$\frac{3x}{x-2} + \frac{4}{x+3} - 2 = -\frac{2-16x}{x^2+x-6}$$

$$\frac{3x}{x-2} + \frac{4}{x+3} - 2 + \frac{2-16x}{x^2+x-6} = 0$$

$$x^2+3x-2x-6$$

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

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

$$\frac{3x^2+9x+4x-8-2(x-2)(x+3)+2-16x}{(x-2)(x+3)} = 0 \cdot D \quad \begin{matrix} C.E. \rightarrow x \neq -2 \wedge \\ x \neq -3 \end{matrix}$$

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

$$3x^2 - 3x - 6 - 2x^2 - 2x + 12 = 0$$

$$x^2 - 5x + 6 = 0$$

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

$$x(x-3) - 2(x-3) = 0$$

$$(x-2)(x-3) = 0$$

$$S = \{3\}$$

$$(x-x_1)(x-x_2)$$

IN GENERALE $ax^2+bx+c = a(x-x_1)(x-x_2)$

$$\Delta = b^2 - 4ac$$

$$= 25 - 24 = 1$$

$$x_{1,2} = \frac{-b \pm \sqrt{\Delta}}{2a} =$$

$$x_{1,2} = \frac{+5 \pm 1}{2} \begin{cases} 3 \\ 2 \end{cases}$$

2 non accettabile perché escluso dalla C.E.