

SE N P C I F I (A Z I O) C

Scorpositivitat

1a)

$$\frac{x-y}{3xy-3x^2+5y-5x} = \frac{x-y}{(3x+5)(y-x)} = \frac{\cancel{x-y}}{-\cancel{(x-y)}(3x+5)} = -\frac{1}{3x+5}$$

Scorpositivitat

$$3xy-3x^2+5y-5x =$$

$$3x(y-x)+5(y-x) =$$

$$(3x+5)(y-x)$$

c. e $x \neq y$
 $x \neq -\frac{5}{3}$

1b)

$$\frac{x-y}{2xy-2x^2+7y-7x} = \frac{x-y}{(2x+7)(y-x)} =$$

Scorpositivitat

$$2xy-2x^2+7y-7x =$$

$$2x(y-x)+7(y-x) =$$

$$(2x+7)(y-x)$$

$$= \frac{\cancel{x-y}}{-\cancel{(x-y)}(2x+7)} = -\frac{1}{2x+7}$$

c. e $x \neq y$
 $x \neq -\frac{7}{2}$

$$2A \left(\frac{2x^5}{x^4 - 3x^3} - \frac{x^2}{x-3} \right)^3 \cdot \left(\frac{3x^2 - 7x - 6}{x^3 - 9x^2 + (7x - 2)} \right)^2 \cdot \left(\frac{x^7 - 9x^5}{9x^2 + 12x + 5} \right)^{-1} =$$

$$2A \left(\frac{2x^5}{x^3(x-3)} - \frac{x^2}{x-3} \right)^3 \cdot \left(\frac{(3x+2)(x-3)}{(x-3)^3} \right)^2 \cdot \left[\frac{x^5(x^2-9)}{(3x+2)^2} \right]^{-1}$$

$$= \left[\frac{2x^5 - x^5}{x^3(x-3)} \right]^3 \cdot \left[\frac{(x-3)^3}{(3x+2)(x-3)} \right]^2 \cdot \frac{(3x+2)^2}{x^5(x-3)(x+3)}$$

$$= \left[\frac{x^5}{x^3(x-3)} \right]^3 \cdot \left[\frac{(x-3)^2}{(3x+2)} \right]^2 \cdot \frac{(3x+2)^2}{x^5(x-3)(x+3)}$$

$$= \left[\frac{x^2}{(x-3)} \right]^3 \cdot \left[\frac{(x-3)^2}{3x+2} \right]^2 \cdot \frac{(3x+2)^2}{x^5(x-3)(x+3)}$$

$$= \frac{x^6}{(x-3)^3} \cdot \frac{(x-3)^4}{(3x+2)^2} \cdot \frac{(3x+2)^2}{x^5(x-3)(x+3)}$$

$$= \frac{x}{x+3}$$

Scandisci

$$3x^2 - 7x - 6$$

$$s = -7$$

$$p = 18$$

$$-9 + 2$$

$$3x^2 - 9x + 2x - 6$$

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

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

METODO 2° SERVA SEMPLIFICAZIONE NELLE PARENTESI PRIMA DI ELEVARE A POTENZA

$$= \frac{x}{x^3(x-3)^3} \cdot \frac{(x-3)^6}{(3x+2)^2(x-3)^2} \cdot \frac{(3x+2)^2}{x^5(x-3)(x+3)}$$

$$= \frac{x}{x+3}$$

$$\left(\frac{2x^5}{x^4 - 2x^3} - \frac{x^2}{x-2} \right)^3 \cdot \left(\frac{4x^2 - 5x - 6}{x^3 - 6x^2 + 12x - 8} \right)^2 \cdot \left(\frac{x^7 - 4x^5}{16x^2 + 24x + 9} \right)^{-1}$$

$$= \left(\frac{2x^5}{x^3(x-2)} - \frac{x^2}{x-2} \right)^3 \cdot \left(\frac{(4x+3)\cancel{(x-2)}}{(x-2)^3} \right)^2 \cdot \left[\frac{x^5(x^2-4)}{(4x+3)^2} \right]^{-1}$$

$$= \left(\frac{2x^5 - x^5}{x^3(x-2)} \right)^3 \cdot \left(\frac{4x+3}{(x-2)^2} \right)^2 \cdot \left[\frac{x^5(x-2)(x+2)}{(4x+3)^2} \right]^{-1}$$

$$= \left(\frac{\cancel{x^5}}{x^3(x-2)} \right)^3 \cdot \left(\frac{(x-2)^2}{4x+3} \right)^2 \cdot \left(\frac{(4x+3)^2}{x^5(x-2)(x+2)} \right) =$$

$$= \left(\frac{x^2}{x-2} \right)^3 \cdot \left(\frac{(x-2)^2}{4x+3} \right)^2 \cdot \left[\frac{(4x+3)^2}{x^5(x-2)(x+2)} \right]^{-1}$$

$$= \frac{x^6}{(x-2)^3} \cdot \frac{\cancel{(x-2)^4}}{(4x+3)^2} \cdot \frac{\cancel{(4x+3)^2}}{x^5 \cancel{(x-2)}(x+2)}$$

$$\frac{x}{x+2}$$

Scoposizione

$$4x^2 - 5x - 6$$

$$S = -5$$

$$P = -24$$

$$\boxed{-8 \quad 3}$$

$$4x^2 - 8x + 3x - 6 =$$

$$4x(x-2) + 3(x-2) =$$

$$(4x+3)(x-2)$$

2° Metodo: Non semplificato prima di elevare a potenza

$$\frac{x^{\cancel{7}1}}{x^{\cancel{3}3}(x-2)^{\cancel{2}2}} \cdot \frac{\cancel{(x-2)^4}}{(4x+3)^2(x-2)^2} \cdot \frac{\cancel{(4x+3)^2}}{x^5 \cancel{(x-2)}(x+2)} = \frac{x}{x+2}$$

3a

$$\frac{64 - 5(7-x) - x^2}{x^2 + x - 6} - \frac{x-9}{2-x} = 0$$

$$\frac{64 - 35 + 5x - x^2}{(x+3)(x-2)} + \frac{x-9}{x-2} = 0$$

$$\frac{64 - 35 + 5x - x^2 + (x-9)(x+3)}{(x+3)(x-2)} = 0$$

$$\begin{array}{ccccccc} 64 & - & 35 & + & 5x & - & x^2 & + & x^2 & + & 3x & - & 9x & - & 27 & = & 0 \\ \omega & \omega & = & & & = & = & \omega & & & & & & & & & \end{array}$$

$$-x + 2 = 0$$

$$x = 2 \quad \text{No ACC}$$

EQUATION IS IMPOSSIBLE

C.E.

$$x \neq 2$$

$$x \neq -3$$

3b

$$\frac{54 - 5(7-x) - x^2}{x^2 - x - 6} - \frac{x-8}{3-x} = 0$$

$$\frac{54 - 35 + 5x - x^2}{(x-3)(x+2)} + \frac{x-8}{x-3} = 0$$

$$\frac{54 - 35 + 5x - x^2 + (x-8)(x+2)}{(x-3)(x+2)} = 0$$

$$\begin{array}{ccccccccccc} 54 & - & 35 & + & 5x & - & x^2 & + & x^2 & + & 2x & - & 8x & - & 16 & = & 0 \\ \omega & \omega & = & & & = & = & \omega & & & & & & & & & \end{array}$$

$$-x + 3 = 0$$

$$x = 3 \quad \text{No ACC}$$

EQUATION IS IMPOSSIBLE

C.E.

$$x \neq 3$$

$$x \neq -2$$

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PRIMA PARTE USI ALTRO ESERCIZIO

$$\frac{64 - 5(7-x) - x^2}{x^2 + x - 6} - \frac{x-9}{2-x} \Rightarrow$$

$$\frac{2-x}{(x-2)(x+3)} \Rightarrow 0$$

$$\frac{-\cancel{(x-2)}}{\cancel{(x-2)}(x+3)} \Rightarrow$$

$$\frac{-1}{x+3} \Rightarrow$$

-1 = 0

IMPOSSIBILE

c.v.

 $x \neq -3$ $x \neq 2$

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PRIMA PARTE (USI ALTRO ESERCIZIO)

2. 2. 2. 2.

$$\frac{64 - 5(7-x) - x^2}{x^2 - x - 6} - \frac{x-8}{3-x} \Rightarrow$$

$$\frac{3-x}{(x-3)(x+2)} \Rightarrow 0$$

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

$$\frac{-\cancel{(x-3)}}{\cancel{(x-3)}(x+2)} \Rightarrow$$

$$\frac{1}{x+2} \Rightarrow 0$$

$$\frac{1}{x+2} \Rightarrow 0$$

-1 = 0

IMPOSSIBILE

c.v.

 $x \neq 3$ $x \neq -2$