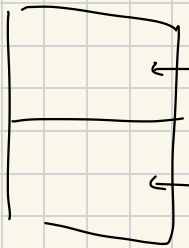

Sistemi
Sistema dis
Diseq. (Corto destro)] 40 pt ← Recupero alcuni 20 su quei 40 è recuperato

Radicali in tutte le salse] 40 pt

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$$\begin{cases} 6\sqrt{7}x - 2y = 4 - \sqrt{3} \\ \sqrt{7}x + \sqrt{3}y = 2 - \frac{\sqrt{3}}{2} \end{cases} \quad \cdot 6$$

$$-2y - 6\sqrt{3}y = 4 - \sqrt{3} - 6\left(2 - \frac{\sqrt{3}}{2}\right)$$

$$y\left(-2 - 6\sqrt{3}\right) = 4 - \sqrt{3} - 12 + 3\sqrt{3}$$

$$y(-2 - 6\sqrt{3}) = -8 + 2\sqrt{3} \rightsquigarrow y = \frac{-8+2\sqrt{3}}{-2-6\sqrt{3}} = y = \frac{2(\sqrt{3}-4)}{-2(3\sqrt{3}+1)} = \frac{4-\sqrt{3}}{3\sqrt{3}+1}$$

$$y = \frac{4-\sqrt{3}}{3\sqrt{3}+1} \cdot \frac{(3\sqrt{3}-1)}{(3\sqrt{3}-1)} = \frac{12\sqrt{3} - 4 - 9 + \sqrt{3}}{26} = \frac{13\sqrt{3} - 13}{26} = \frac{13(\sqrt{3}-1)}{26 \cdot 2} = \frac{\sqrt{3}-1}{2}$$

Metto la y nella I

$$6\sqrt{7}x - (\sqrt{3}-1) = 4 - \sqrt{3} \rightsquigarrow 6\sqrt{7}x = 4 - \sqrt{3} + \sqrt{3} - 1$$

$$6\sqrt{7}x = 3 \rightsquigarrow x = \frac{3}{6\sqrt{7}} = \frac{1}{2\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{\sqrt{7}}{14}$$

Sol: $P = \left(\frac{\sqrt{7}}{14}; \frac{\sqrt{3}-1}{2}\right)$

45

$$\sqrt{2}(2x + \sqrt{2}) > (\sqrt{3} - \sqrt{2})x - \sqrt{3}x + 4$$

$$2\sqrt{2}x + 2 > \sqrt{3}x - \sqrt{2}x - \sqrt{3}x + 4$$

$$3\sqrt{2}x > 2 \rightsquigarrow x > \frac{2}{3\sqrt{2}} = \frac{\sqrt{2}}{3} \quad \boxed{x > \frac{\sqrt{2}}{3}}$$

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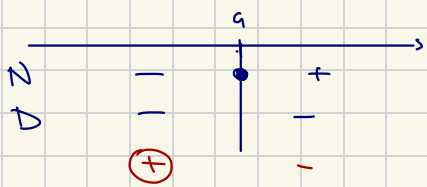
$$\frac{x-4}{\sqrt{2}-\sqrt{3}} \geq 0$$

$N \geq 0 \rightsquigarrow x \geq 4$

$D > 0 \rightsquigarrow$ Mai



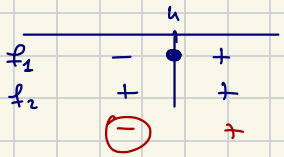
$x \leq 4$

$$\frac{(x-4)}{\sqrt{2}-\sqrt{3}} \cdot \frac{\sqrt{2}+\sqrt{3}}{\sqrt{2}+\sqrt{3}} \geq 0 \qquad \frac{(x-4)(\sqrt{2}+\sqrt{3})}{-1} \geq 0$$

$(x-4)(\sqrt{2}+\sqrt{3}) \leq 0$

$f_1 \geq 0 \rightsquigarrow x \geq 4$

$f_2 \geq 0 \rightsquigarrow \forall x \in \mathbb{R}$ sempre



$x \leq 4$

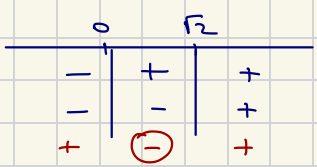
602: $\dfrac{\sqrt{5}-x}{x-\sqrt{2}} > \dfrac{\sqrt{10}}{\sqrt{2}x-2}$ $\quad \sqrt{2}(x-\sqrt{2})$

$$\frac{\sqrt{5}-x}{x-\sqrt{2}} - \frac{\sqrt{10}\ \sqrt{5}}{\sqrt{2}(x-\sqrt{2})} > 0 \rightsquigarrow \frac{\sqrt{5}-x-\sqrt{5}}{x-\sqrt{2}} > 0$$

$$\frac{-x}{x-\sqrt{2}} > 0 \rightsquigarrow \boxed{\frac{x}{x-\sqrt{2}} < 0}$$

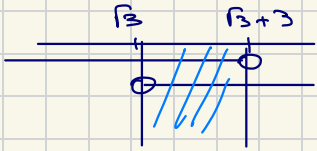
$N > 0 \quad x > 0$

$D > 0 \quad x-\sqrt{2} > 0 \rightsquigarrow x > \sqrt{2}$



$0 < x < \sqrt{2}$

606 $\begin{cases} (1-\sqrt{3})x > -2\sqrt{3} \\ \dfrac{\sqrt{3}x-1}{\sqrt{2}} > \sqrt{2} \end{cases}$ $\begin{cases} x < \sqrt{3}+3 \\ x > \sqrt{3} \end{cases}$



Sol finale

(I) $x < \dfrac{-2\sqrt{3}}{1-\sqrt{3}} \cdot \dfrac{1+\sqrt{3}}{1+\sqrt{3}}$ WARNING: $1-\sqrt{3} < 0$

$\sqrt{3} < x < \sqrt{3}+3$

$x < \dfrac{-2\sqrt{3}-6}{-2} = \dfrac{-2(\sqrt{3}+3)}{-2} \Rightarrow x < \sqrt{3}+3$

(II) $\dfrac{\sqrt{3}x-1-2}{\sqrt{2}} > 0 \Rightarrow \dfrac{\sqrt{3}x-3}{\sqrt{2}} > 0$

Non c'è la x ed è positivo come $\frac{x}{2} > 0$

$\sqrt{3}x-3 > 0 \quad \sqrt{3}x > 3 \quad x > \dfrac{3}{\sqrt{3}} = \sqrt{3}$