

DISQUATIONE INTERA

$$\frac{x^2+1}{2} - \frac{(x^2-1)^2}{4} < 1$$

$$\frac{2x^2+2-x^4+2x^2-1}{4} < \frac{4}{4} \quad -x^4+4x^2-3 < 0$$

cambio segni e verso!

$$x^4-4x^2+3 > 0$$

1° METODO | omgo $x^2=t$

$$t^2-4t+3 > 0 \quad t^2-4t+3=0 \quad t_{1,2}=2 \pm \sqrt{4-3} = \begin{matrix} 3 \\ 1 \end{matrix}$$

$$\begin{matrix} (+) & & (+) \\ 1 & & 3 \end{matrix} \quad t < 1 \vee t > 3$$

$$\Rightarrow x^2 < 1 \vee x^2 > 3$$

$$x^2-1 < 0$$

$$x^2-3 > 0$$

$$\begin{matrix} + & & + \\ -1 & & 1 \end{matrix}$$

$$\vee \begin{matrix} + & & + \\ -\sqrt{3} & & \sqrt{3} \end{matrix}$$

$$S_F: x < -\sqrt{3} \vee -1 < x < 1 \vee x > \sqrt{3}$$

$$-1 < x < 1$$

$$x < -\sqrt{3} \vee x > \sqrt{3}$$

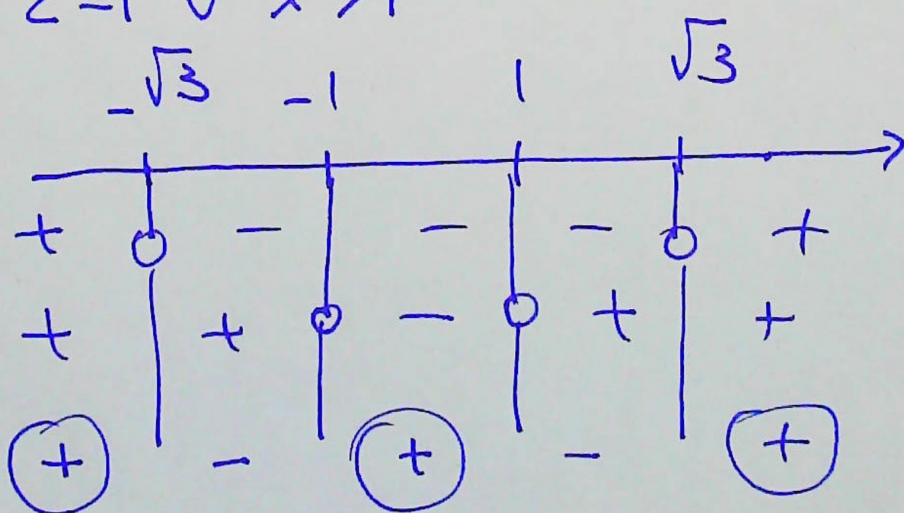
2° METODO (scompongo)

$$x^4-4x^2+3 > 0 \rightarrow (x^2-3)(x^2-1) > 0$$

$$1^{\circ} F > 0 \quad x^2-3 > 0 \quad x < -\sqrt{3} \vee x > \sqrt{3}$$

$$2^{\circ} F > 0 \quad x^2-1 > 0 \quad x < -1 \vee x > 1$$

Regola dei segni



$$S_F: x < -\sqrt{3} \vee -1 < x < 1 \vee x > \sqrt{3}$$