

ES N 320 PAG 42

$$\frac{-kx^4 + 1}{3} > 0 \text{ \u00e9 verificata } \forall x \in \mathbb{R}$$

$$-kx^4 + 1 > 0$$

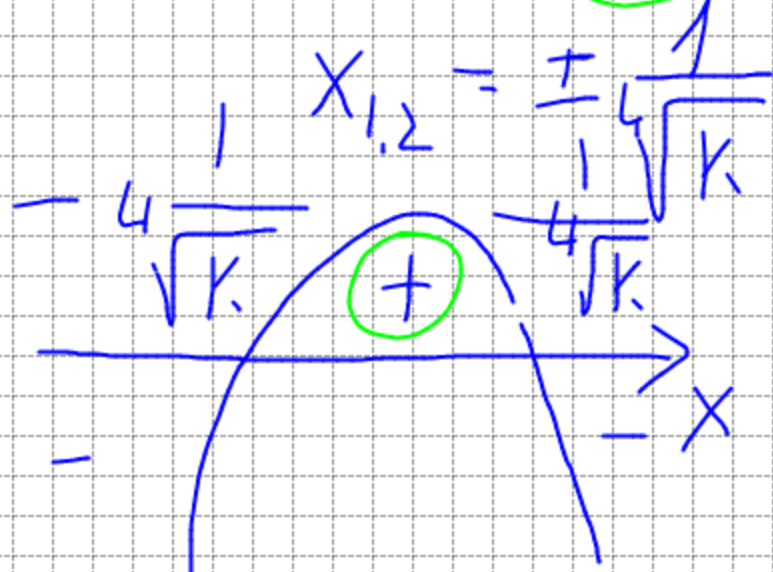
$$-k > 0$$

$$-k > 0 \rightarrow k < 0 \quad \forall x \in \mathbb{R}$$

$$-k < 0 \rightarrow k > 0 \quad 1 - kx^4 = (1 - \sqrt{k}x^2)(1 + \sqrt{k}x^2) > 0$$

$$1 - \sqrt{k}x^2 > 0$$

sempre
positiva



N 322

$$4x^3 + 1 \geq 0 \quad \forall x \in \mathbb{R}$$

Esercizio 332

$$9x^3 - 7x - 3 > 0$$

$$P(-1) = 0$$

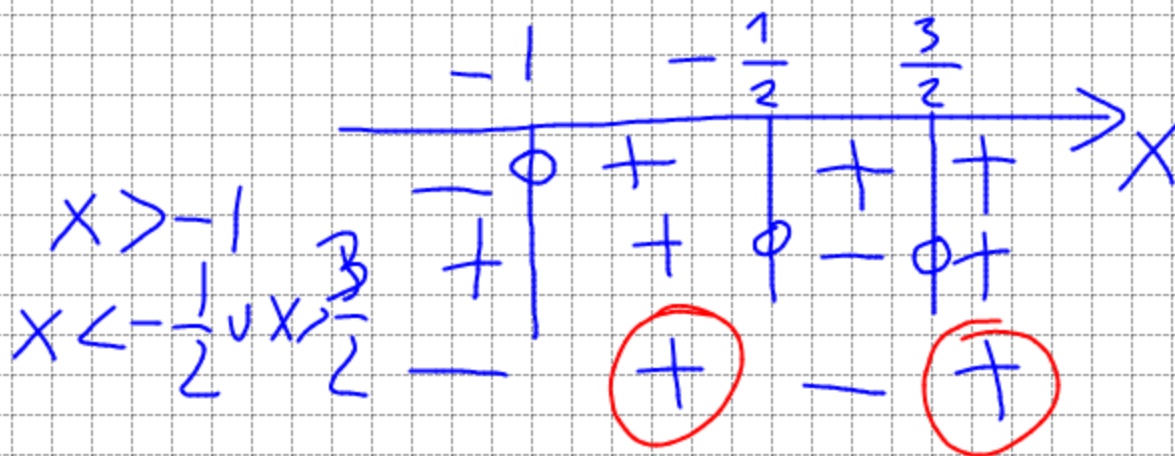
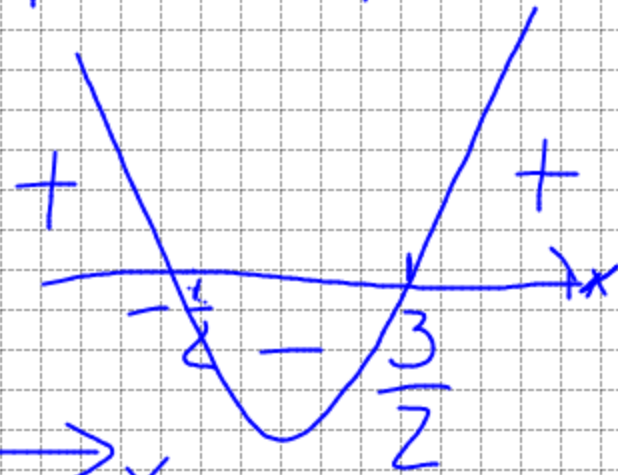
$$(x+1)(9x^2 - 4x - 3) > 0$$

$$9x^2 - 4x - 3 = 0$$

$$x_{1,2} = \frac{2 \pm \sqrt{4 + 12}}{4} = \frac{2 \pm 4}{4}$$

4	0	-7	-3
-4	9		
-1			
4	-4	-3	3
//			

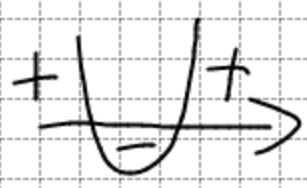
$$= \frac{-2 \pm 4}{4} = -\frac{1}{2} \text{ and } \frac{3}{2}$$



ES 409

$$\sqrt{x-2} = \sqrt{x^2-4}$$

$$\sqrt{x-2} = -\sqrt{x^2-4}$$



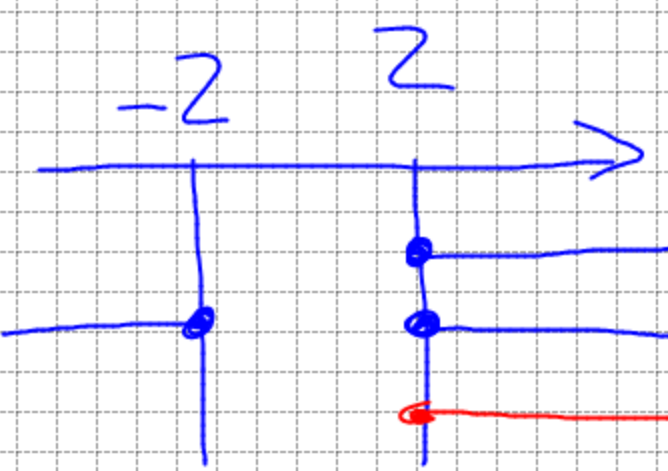
C.E.

$$\begin{cases} x-2 \geq 0 \\ x^2-4 \geq 0 \end{cases}$$

$$\begin{cases} x \geq 2 \\ x \leq -2 \vee x \geq 2 \end{cases}$$

$$x \geq 2$$

C.E.



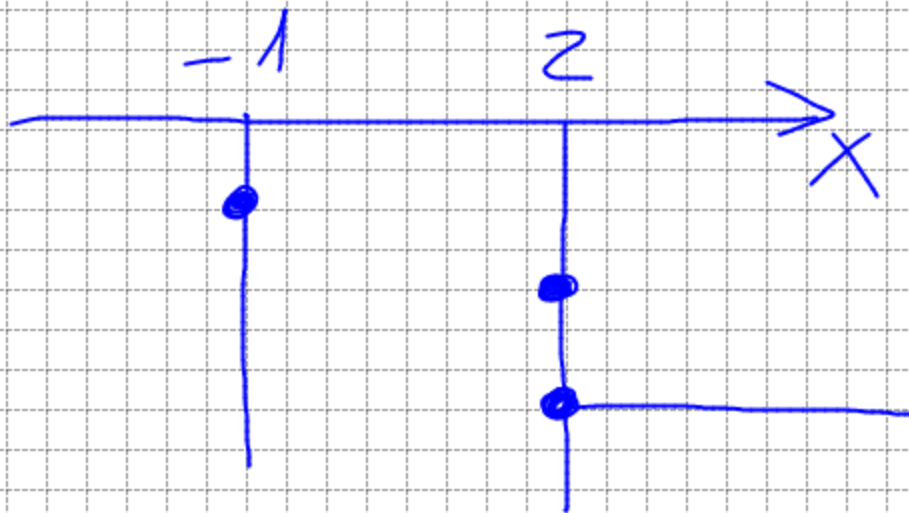
$$\left\{ \begin{array}{l} (\sqrt{x-2})^2 = (\sqrt{x^2-4})^2 \\ x \geq 2 \end{array} \right. \left\{ \begin{array}{l} x-2 = x^2-4 \\ x \geq 2 \end{array} \right. \left\{ \begin{array}{l} x^2-x+2-4=0 \\ x \geq 2 \end{array} \right.$$

$$\left\{ \begin{array}{l} x^2-x-2=0 \\ x \geq 2 \end{array} \right. \quad x_{1,2} = \frac{1 \pm \sqrt{1+8}}{2} = \frac{1 \pm 3}{2} \begin{array}{l} -1 \\ 2 \end{array}$$

$$x = -1$$

$$x = 2$$

$$x \geq 2$$



$$x = 2$$