

$$3x^5 - 2x^4 + 6x^3 - 4x^2 \geq 0$$

$$3x^3(x^2+2) - 2x^2(x^2+2) \geq 0$$

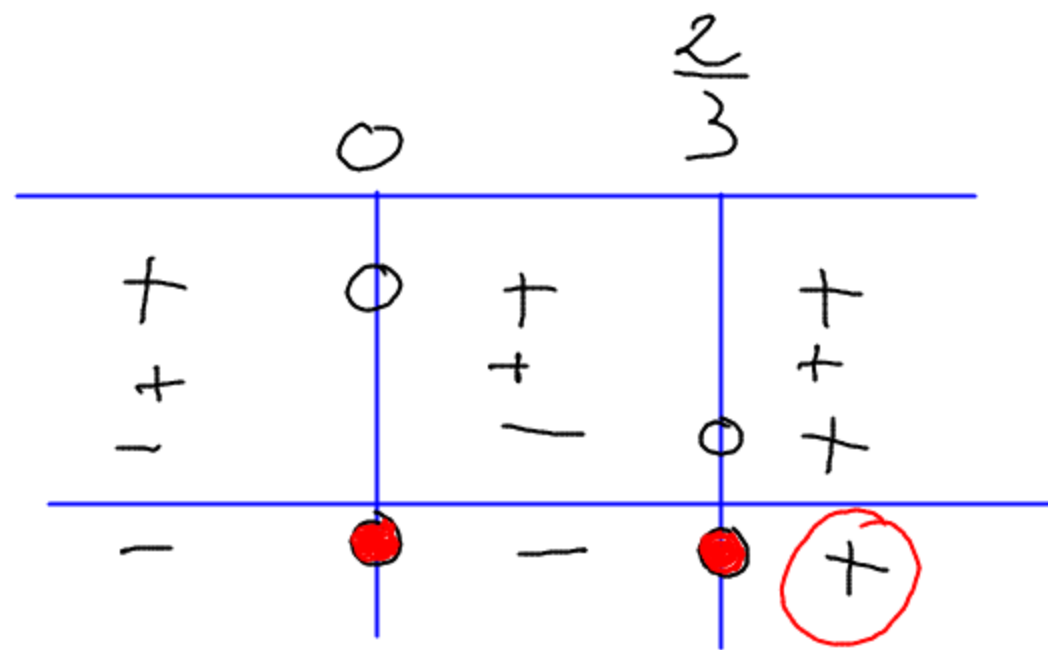
$$(3x^3 - 2x^2)(x^2+2) \geq 0$$

$$x^2(3x-2)(x^2+2) \geq 0$$

$$x^2 = 0 \text{ (UOPPIA)}$$

$$x = \frac{2}{3}$$

$$\begin{array}{l} \cancel{x^2} \\ \cup x^2+2 \\ \cancel{3x-2} \end{array}$$



$$x = 0 \vee x \geq \frac{2}{3}$$

$$\{0\} \cup \left[ \frac{2}{3}; \infty \right[$$

$$\begin{cases} \frac{x-2}{x+1} \geq 2 \\ x^4 + 3x^2 - 4 \geq 0 \end{cases}$$

1 U1S

$$\frac{x-2}{x+1} - 2 \geq 0$$

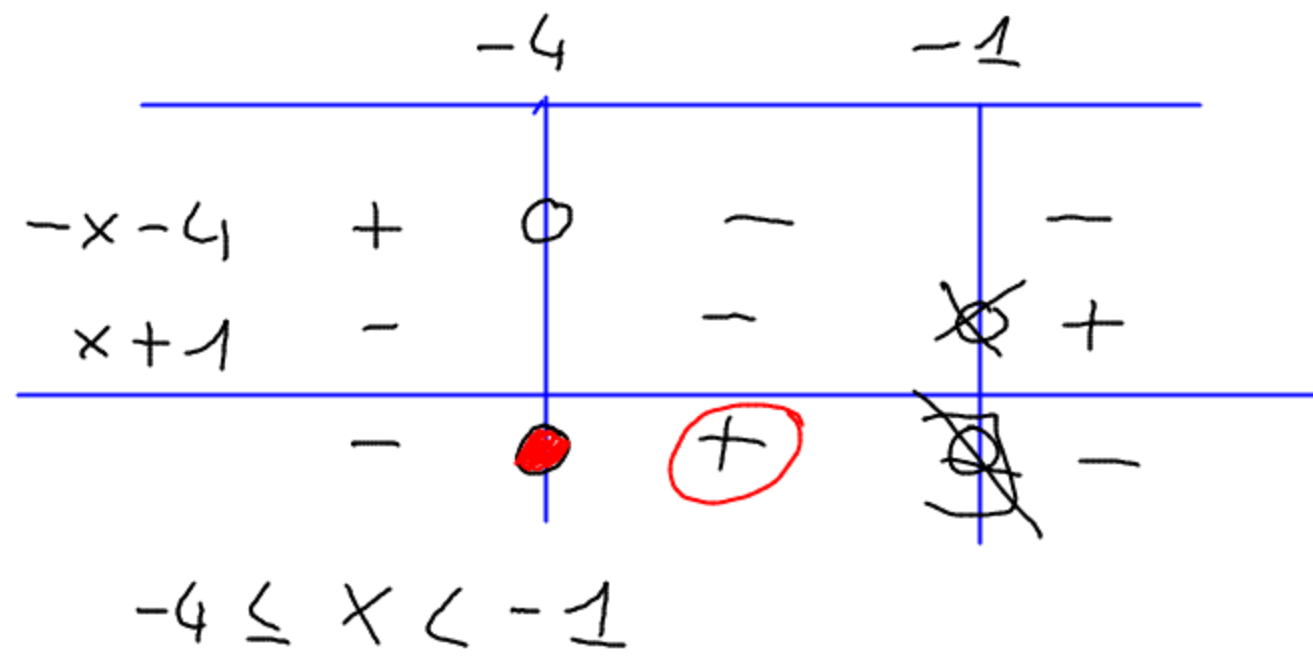
$$\frac{x-2-2(x+1)}{x+1} \geq 0$$

$$\frac{x-2-2x-2}{x+1} \geq 0$$

$$\frac{-x-4}{x+1} \geq 0$$

$$x = -4$$

$$x = -1$$



2 U1S

$$x^4 + 3x^2 - 4 \geq 0$$

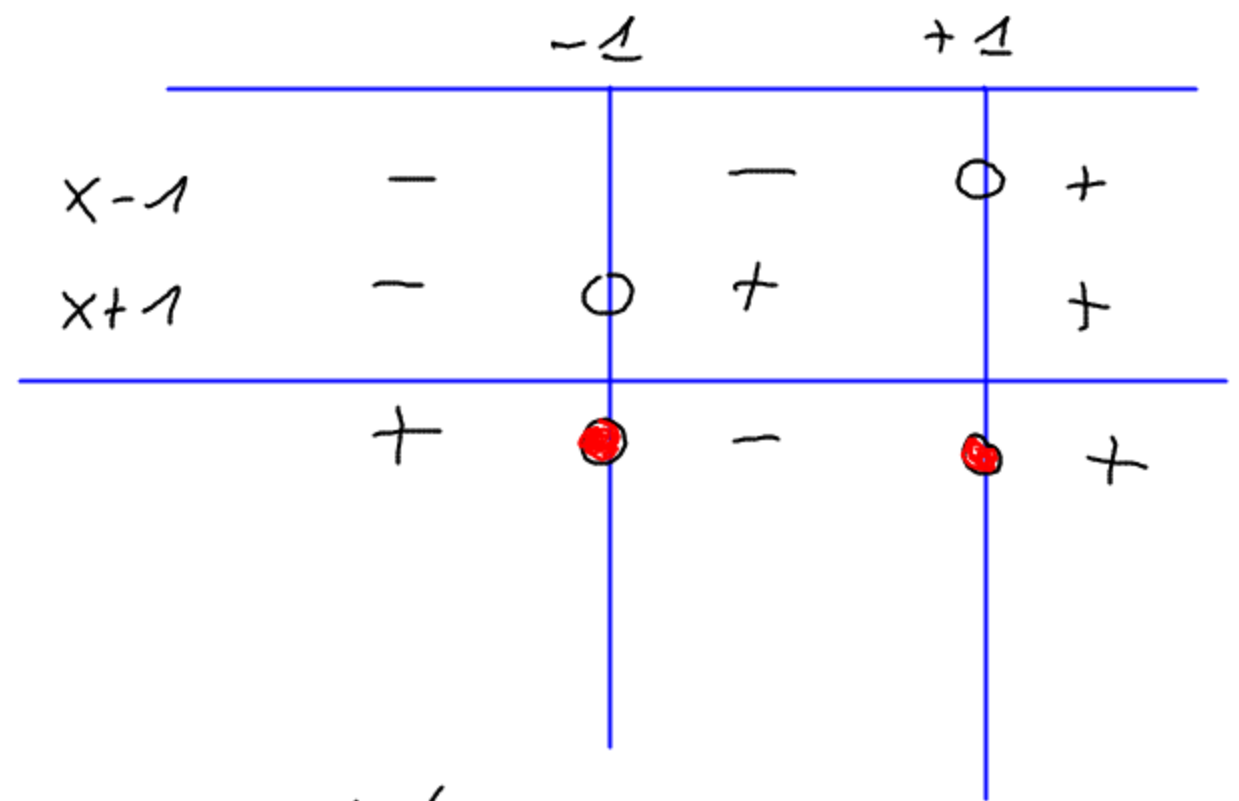
$$x^4 + 4x^2 - x^2 - 4 \geq 0$$

$$x^2(x^2-1) + 4(x^2-1) \geq 0$$

$$(x^2+4)(x^2-1) \geq 0$$

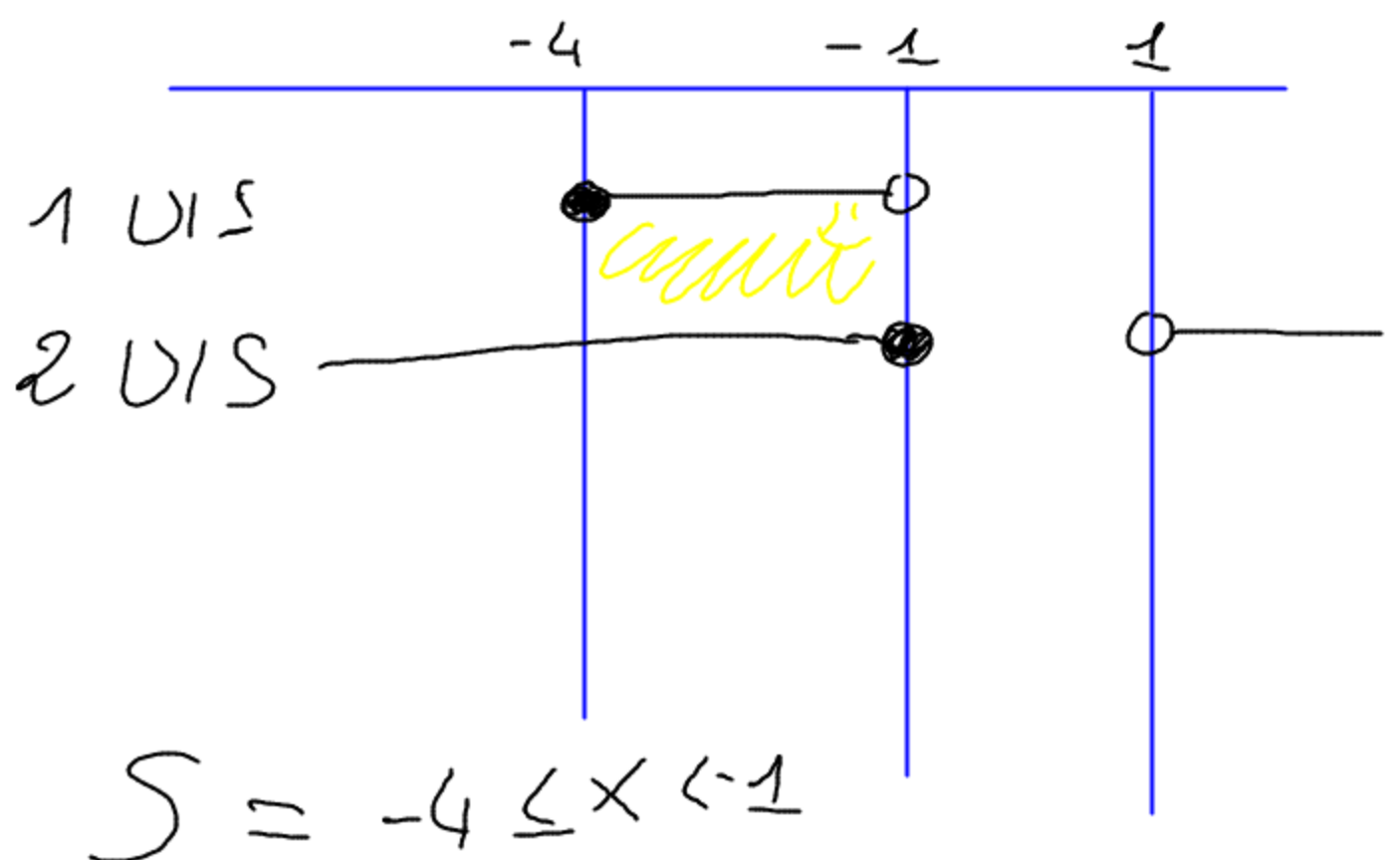
$$(x^2+4)(x-1)(x+1) \geq 0$$

$$x = \pm 1$$



$$x \leq -1 \vee x \geq 1$$

$$\begin{cases} -4 \leq x < -1 \\ x \leq -1 \vee x \geq 1 \end{cases}$$





# SCOMPOSIZIONI

$$3x^2 + 5 \text{ irriducibile}$$

$$x^3 + 8 = (x + 2)(x^2 + 4 - 2x)$$

$$4x^2 - 4x + 1 = (2x - 1)^2$$

## EQUAZIONI

$$x^3 - 3x = 0$$

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

$$x = 0$$

$$x^2 = 3 \rightarrow x = \pm\sqrt{3}$$

$$S = \{-\sqrt{3}; 0; \sqrt{3}\}$$

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

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

$$x = 0 \text{ tripla}$$

$$x = 3 \text{ doppia}$$

$$(x-3)(x+3) = x^2 - 9$$

$$(x-3)^2 = x^2 + 9 - 6x$$

$$S = \{0 \text{ (triplo); } 3 \text{ (doppio)}\}$$