

INTERSEZIONI DELLA FUNZIONE CON GLI ASSI CARTESIANI

→ DOMINIO

$$\begin{cases} y = f(x) \\ x = 0 \end{cases} \quad \begin{array}{l} \uparrow \\ \text{Asse } y \end{array}$$

$$A(0, f(0))$$

$$\begin{cases} y = f(x) \\ y = 0 \end{cases} \quad \begin{array}{l} \nearrow \\ \text{Asse } x \end{array}$$

$$f(x) = 0$$

$$y = \frac{x+1}{x+5}$$

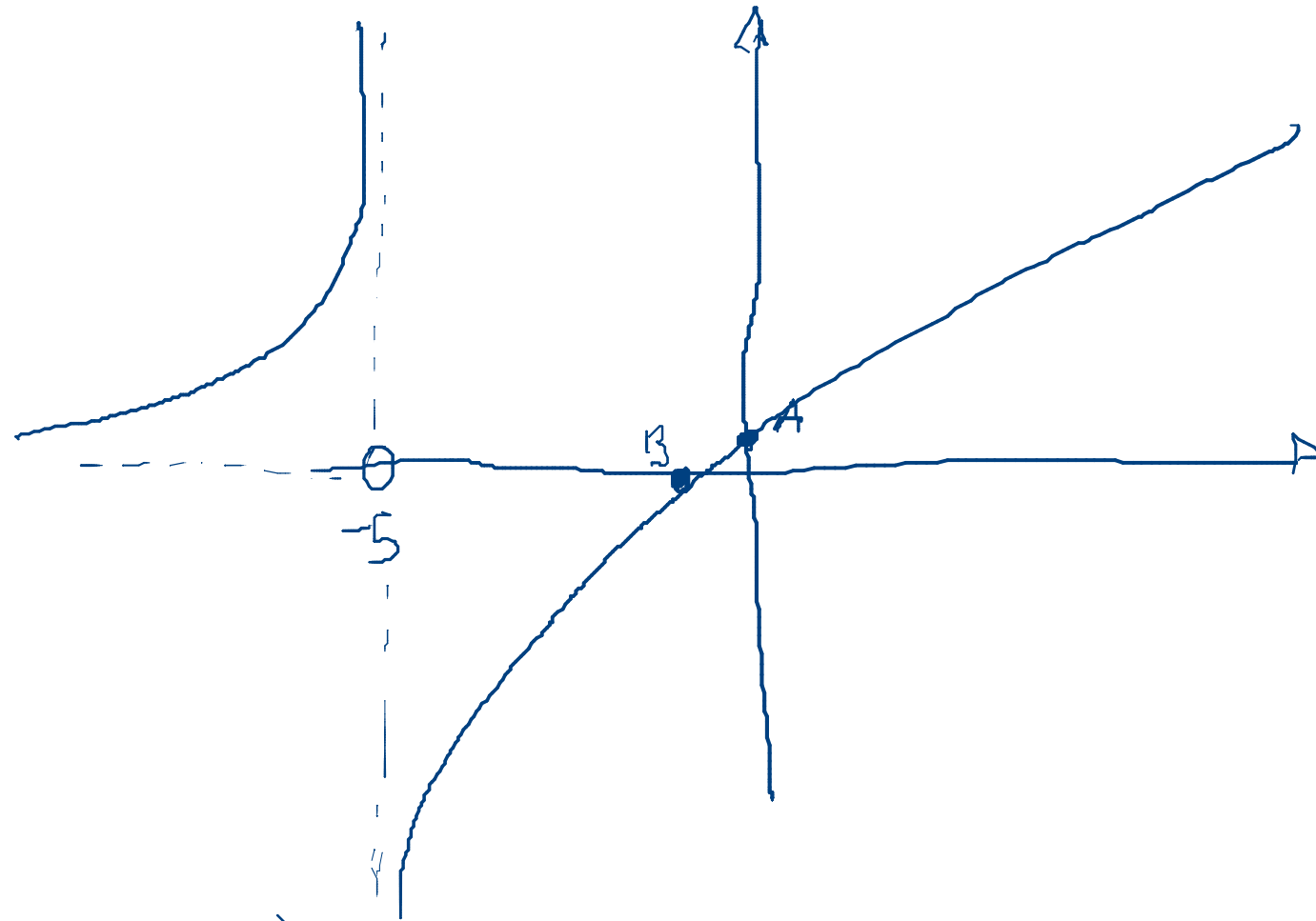
$$D: \begin{aligned} x+5 &\neq 0 \\ x &\neq -5 \end{aligned}$$

$$\text{Asse } y \begin{cases} y = \frac{x+1}{x+5} = \frac{1}{5} \\ x = 0 \end{cases}$$

$$A(0; \frac{1}{5})$$

$$\text{Asse } x \begin{cases} y = \frac{x+1}{x+5} \quad (\cancel{x+5}) \quad \frac{x+1}{\cancel{x+5}} = 0 \quad (x+5) \\ y = 0 \end{cases}$$

$$B(-1; 0) \quad x+1=0, \quad x=-1$$

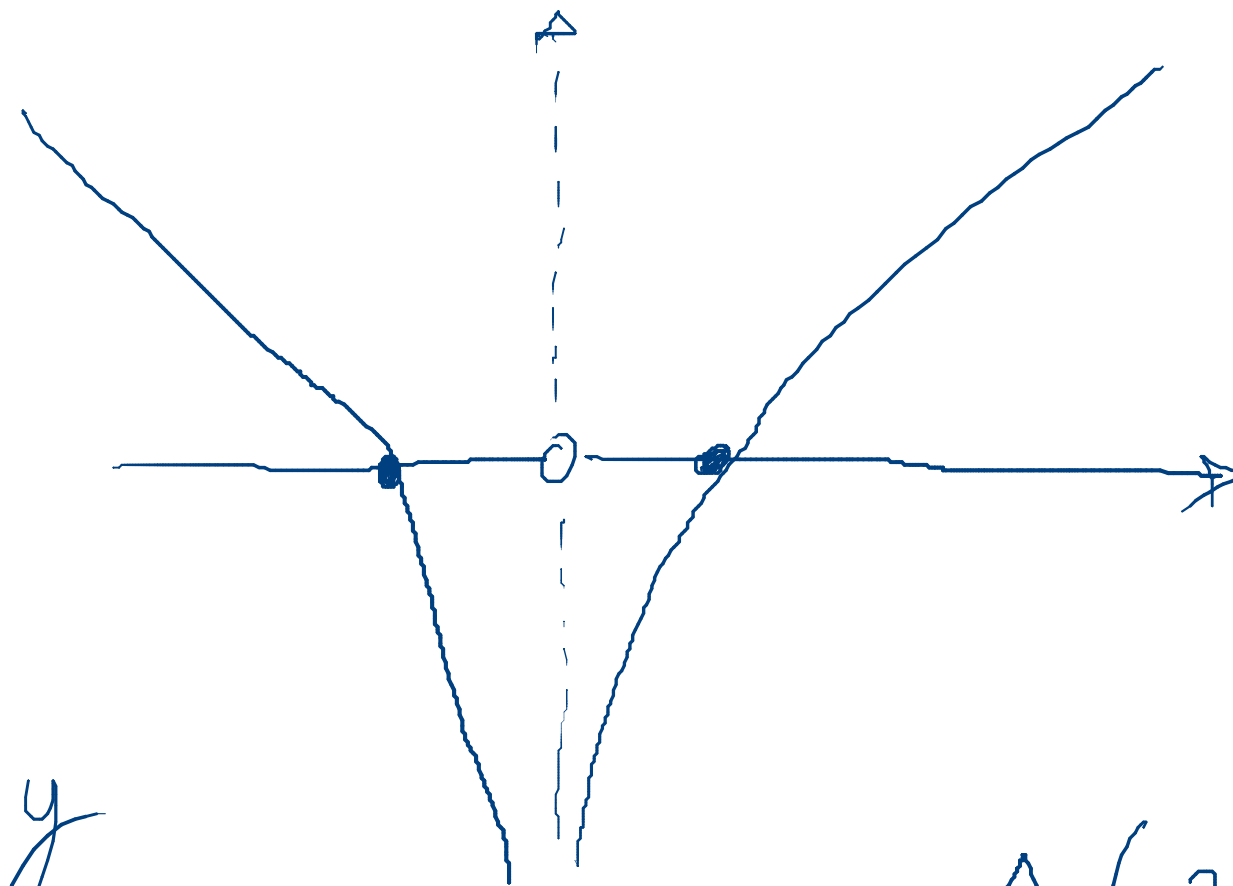


$$y = \frac{x^2 - 4}{x}$$

D: $x \neq 0$

Asse y $\left\{ \begin{array}{l} y = \frac{x^2 - 4}{x} = \frac{-4}{0} \quad \emptyset \\ x = 0 \end{array} \right.$ NO INT. Asse y

Asse x $\left\{ \begin{array}{l} y = \frac{x^2 - 4}{x} \\ y = 0 \end{array} \right.$ $\cancel{x} \cdot \frac{x^2 - 4}{\cancel{x}} = 0 \quad \cdot x$



A (2, 0)
B (-2, 0)

$$x^2 - 4 = 0$$

$$x^2 = 4, \quad x = \pm 2$$

$$y = x^3 + x$$

$$D: \mathbb{R}$$

Asse $\begin{cases} y = x^3 + x \\ x = 0 \end{cases}$

$$A(0, 0)$$

Asse $\begin{cases} y = x^3 + x \\ y = 0 \end{cases}$

$$x^3 + x = 0$$

$$\underbrace{x \cdot (x^2 + 1)} = 0$$

$$x = 0 \rightarrow A$$

$$x^2 + 1 = 0; \quad x^2 = -1$$

$$\Delta = 0 - 4 = -4 \quad \emptyset$$

