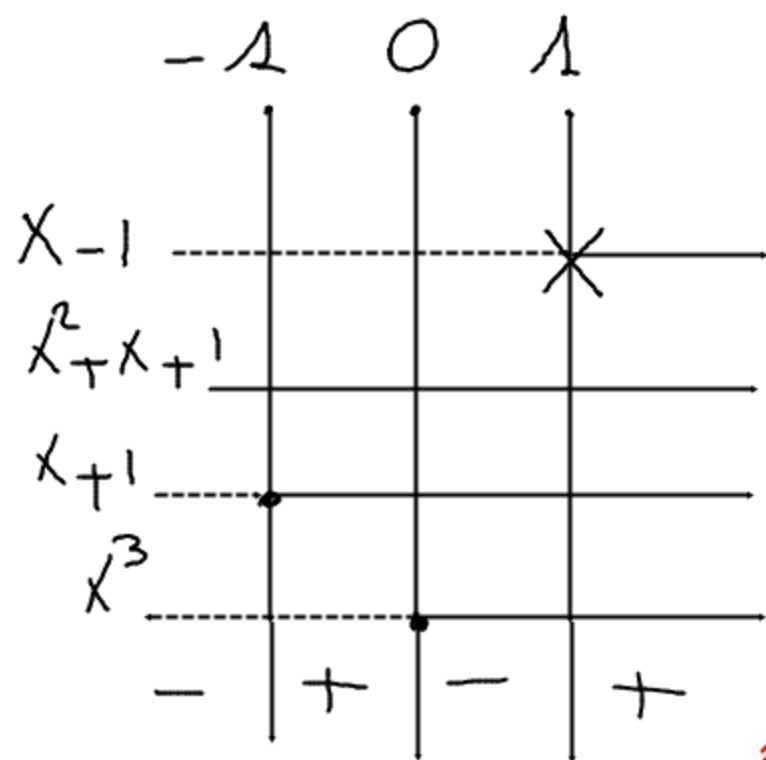


$$y = \frac{x^4 + x^3}{x^3 - 1}$$

$$y = \frac{x^3(x+1)}{(x-1)(x^2+x+1)}$$

$$D = \{ \forall x \in \mathbb{R} : x \neq 1 \}$$

$$D = ]-\infty; 1[ \cup ]1; +\infty[$$



AS OBL:  $y = x + 1$  (vedi lezione precedente)

AS. VERT:  $x = 1$

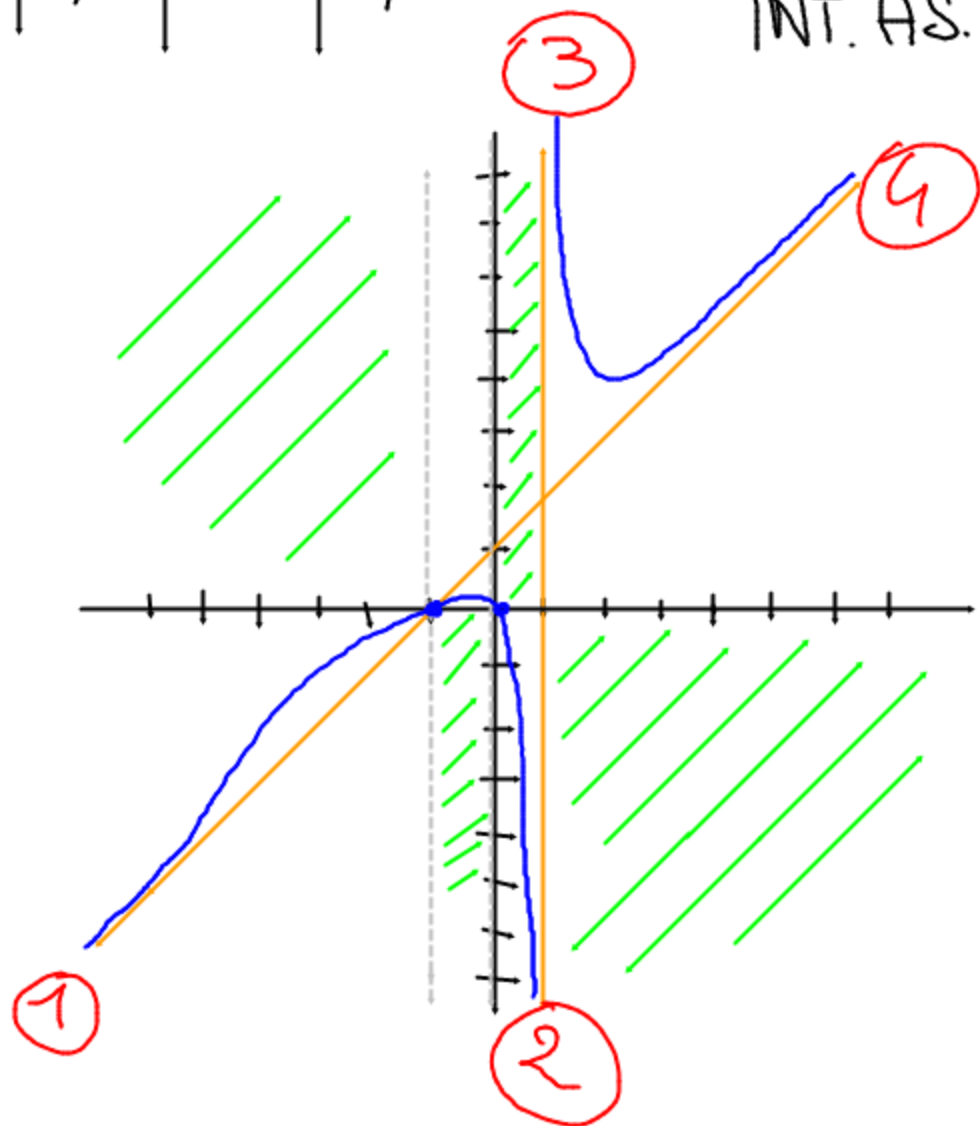
INT. CON OSS:  $(-1; 0)$   $(0; 0)$

INT. AS. OBL:  $(-1; 0)$

$$\begin{cases} y = x + 1 \\ y = \frac{x^4 + x^3}{x^3 - 1} \end{cases}$$

isolam

$$\begin{cases} \frac{x^4 + x^3}{x^3 - 1} = \frac{(x^3 - 1)(x + 1)}{(x^3 - 1)} \Rightarrow x^4 + x^3 = x^4 + x^3 - x - 1 \\ -x - 1 = 0 \Rightarrow x = -1 \\ y = 0 \end{cases}$$



①  $\lim_{x \rightarrow -\infty} y = -\infty$

②  $\lim_{x \rightarrow 1^-} y = -\infty$

③  $\lim_{x \rightarrow 1^+} y = +\infty$

④  $\lim_{x \rightarrow +\infty} y = +\infty$