

I LIMITI DESTRO E SINISTRO



UN LIMITE DESTRO O SINISTRO È VERIFICATO IN UN
 INTORNO DESTRO O SINISTRO

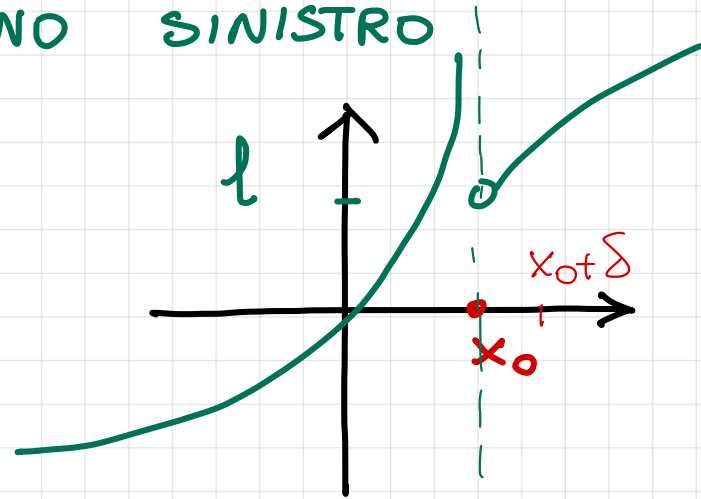
$$] x_0; x_0 + \delta [$$

INTORNO DESTRO

$$] x_0 - \delta; x_0 [$$

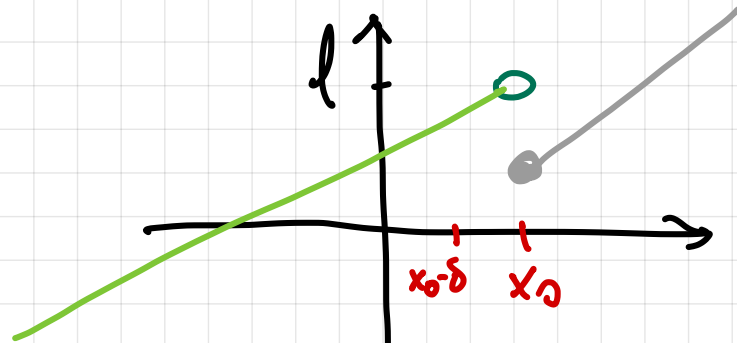
INTORNO SINISTRO

$$\lim_{x \rightarrow x_0^+} f(x) = l$$



$$\forall \varepsilon > 0 \exists \delta > 0 \mid x \in] x_0; x_0 + \delta [\Rightarrow l - \varepsilon < f(x) < l + \varepsilon$$

$$\lim_{x \rightarrow x_0^-} f(x) = l$$

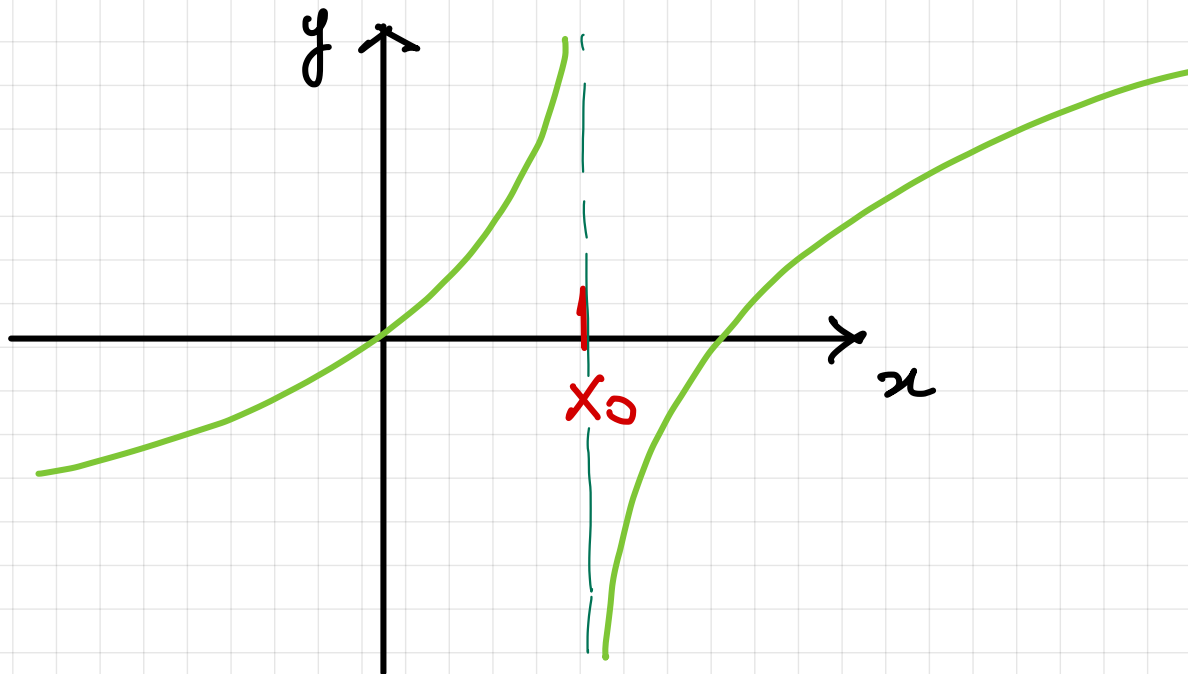


$$\forall \varepsilon > 0 \exists \delta > 0 \mid x \in] x_0 - \delta; x_0 [\Rightarrow l - \varepsilon < f(x) < l + \varepsilon$$

CASI CON INFINITO

$$\lim_{x \rightarrow x_0^-} f(x) = +\infty$$

$$\lim_{x \rightarrow x_0^+} f(x) = -\infty$$



ESEMPIO

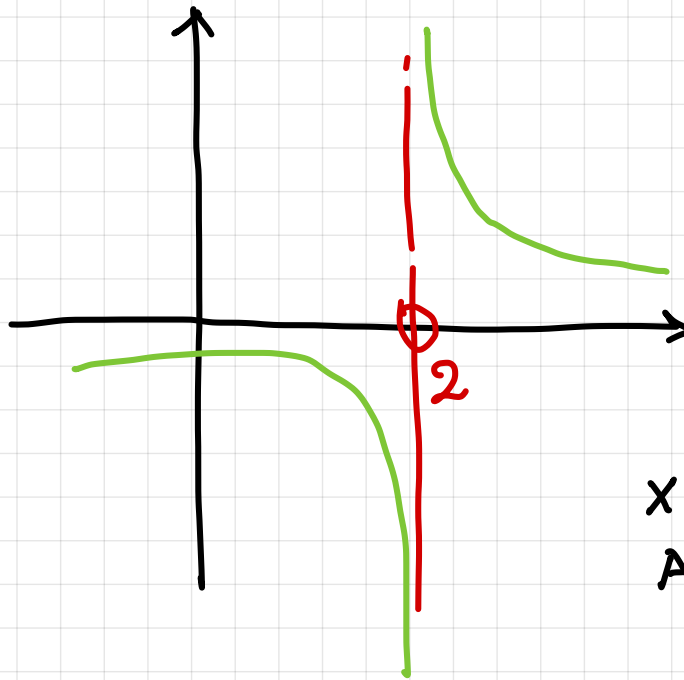
$$f(x) = \frac{1}{x-2}$$

$$D: \mathbb{R} - \{2\}$$

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

2,001

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



$x=2$ retta
ASINTOTO VERTICALE

$$\lim_{x \rightarrow +\infty} \frac{1}{x-2} = 0$$