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$$(p) \quad f(x) = -\log(|\sin(x)|)$$

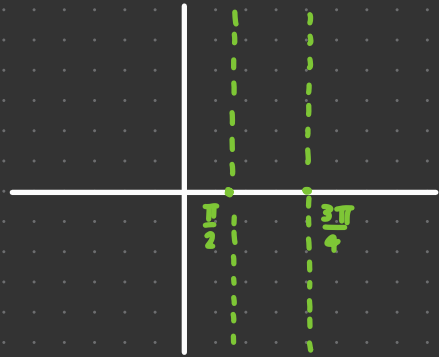
$$f(x) = -\log(|\sin(x)|)$$

$$|\sin(x)| > 0 \quad \forall x \in \mathbb{R}$$

suchen

$$f(x) = -\log(|\sin(x)|) = 0$$

$$|\sin(x)| = 1 \quad x = \frac{\pi}{2} \vee x = \frac{3\pi}{2}$$



$$(q) f(x) = \sqrt[3]{\frac{x^3 - 1}{x}}$$

$$\frac{\sqrt{\frac{x^3 - 1}{x}}}{x}$$

$$D: \frac{x^3 - 1}{x} \geq 0 ; x \neq 0 \quad \sqrt{\frac{x^3 - 1}{x}} = \sqrt{1 - 1/x}$$

$$x^3 - 1 \geq 0; x \geq 1$$

$$x > 0$$

$$\begin{array}{ccc} 0 & 1 & \\ - & - & + \\ - & + & + \\ \hline + & - & + \end{array}$$

SIGN

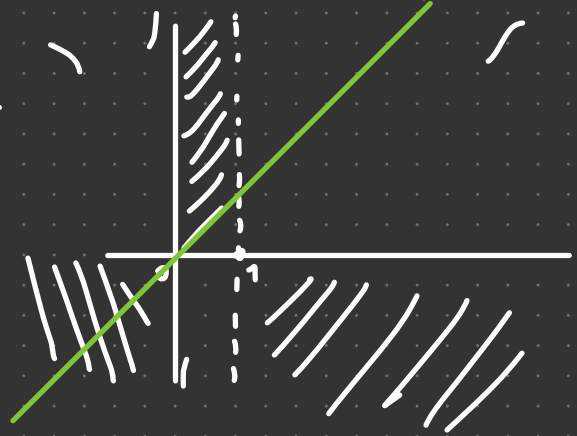
$$\lim_{x \rightarrow +\infty} f(x) = +\infty$$

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

$$\lim_{x \rightarrow 0^+} \sqrt[3]{x^2 - 1/x} = -\infty$$

$$\lim_{x \rightarrow 0^-} \sqrt[3]{x^2 - 1/x} = +\infty$$

$$D: (-\infty, 0) \cup (0, +\infty)$$



ASYMPTOTES

VERTICAL: $x = 0$

OBLIQUE

$$m = \lim_{x \rightarrow +\infty} \frac{f(x)}{x} = 1$$

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

$$\lim_{x \rightarrow +\infty} \sqrt[3]{\frac{x^3 - 1}{x}} - x$$

$$\lim_{x \rightarrow +\infty} \sqrt[3]{x^2 - 1/x} - x = x - x = 0$$

$$y = x$$