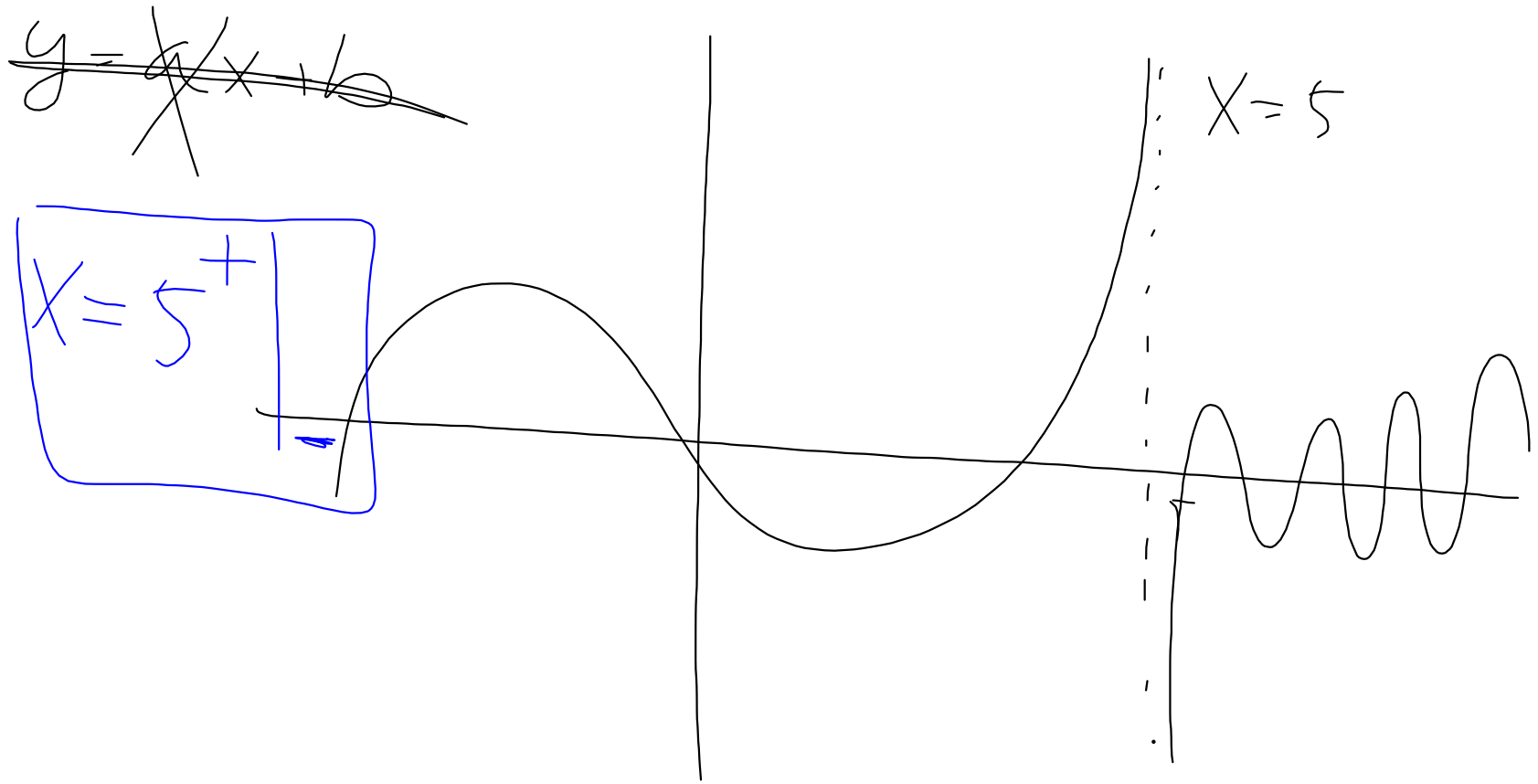
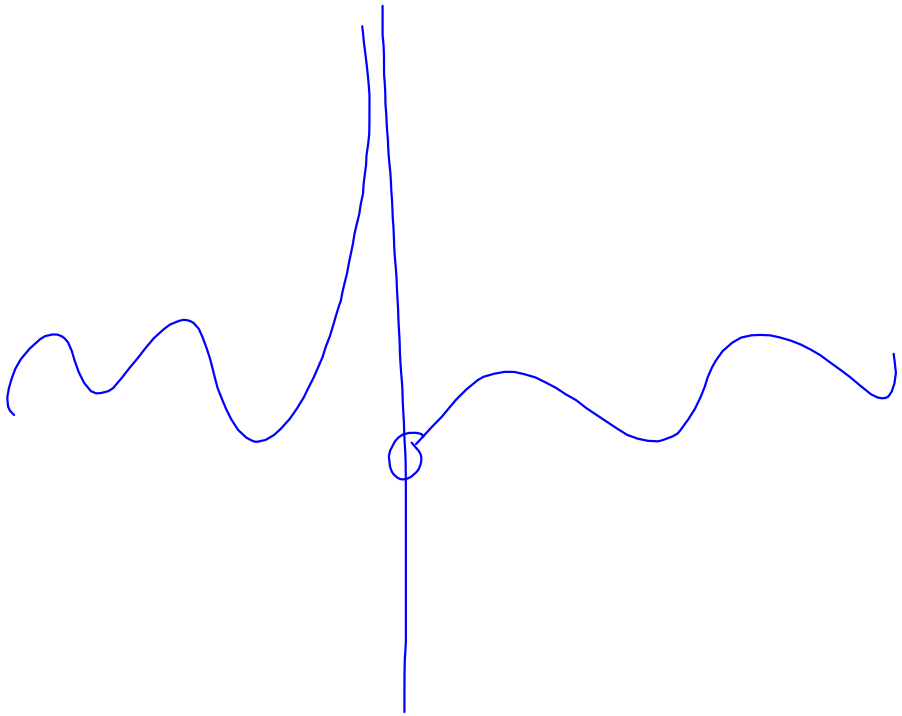
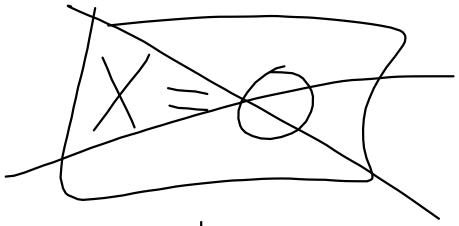
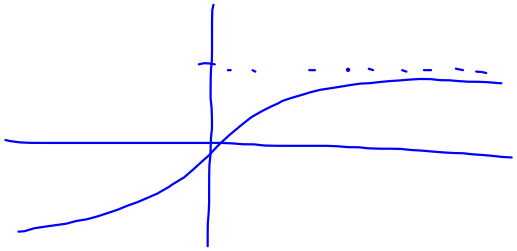

y = x + b
X = 5
X = 5+



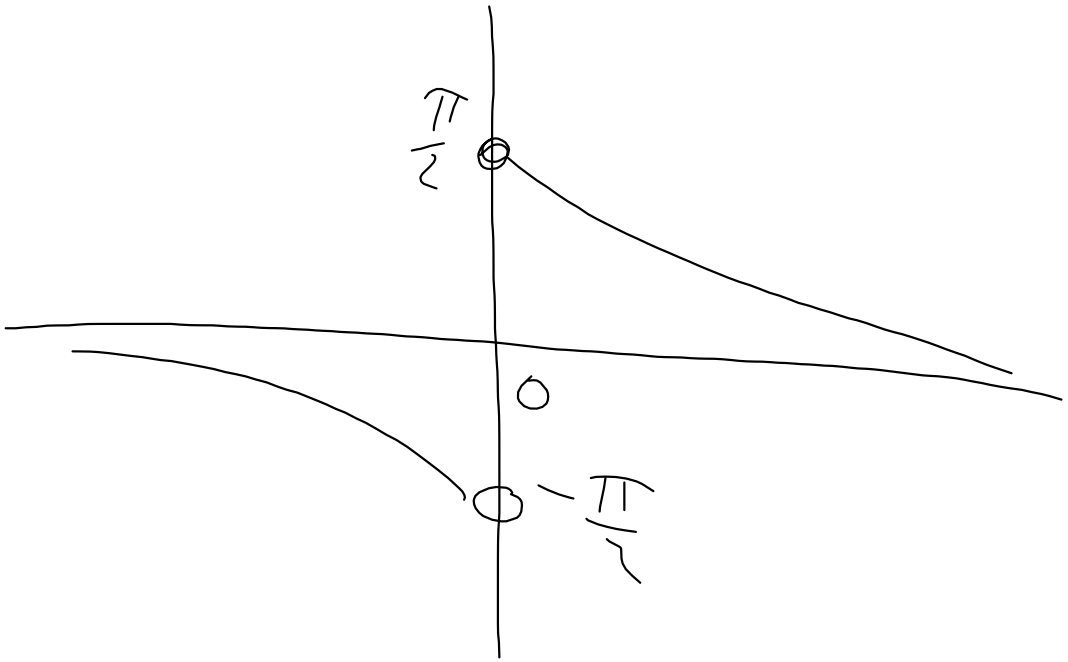
$\arctg \frac{1}{x}$,





$$\lim_{x \to 0^+} \arctg \frac{1}{x} = \left| \arctg(+\infty) \right| = \frac{\pi}{2}$$

$$\lim_{x \to 0^-} \arctg \frac{1}{x} = \left| \arctg(-\infty) \right| = -\frac{\pi}{2}$$


π/2
0
-π/2

$$f(x) = e^{\frac{1}{x}}$$

$x = 0$	$+$

$$\lim_{x \to 0^-} e^{\frac{1}{x}} = \left| e^{\frac{1}{0^-}} = e^{-\infty} = \frac{1}{e^{\infty}} = \frac{1}{\infty} \right| = 0$$

$$\lim_{x \to 0^+} e^{\frac{1}{x}} = \left| e^{\frac{1}{0^+}} = e^{+\infty} \right| = \infty$$

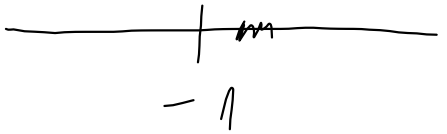
$$f(x) = \frac{1}{1-x^2}, \quad x = 1^+ \Big| 1^-, \quad x = -1$$

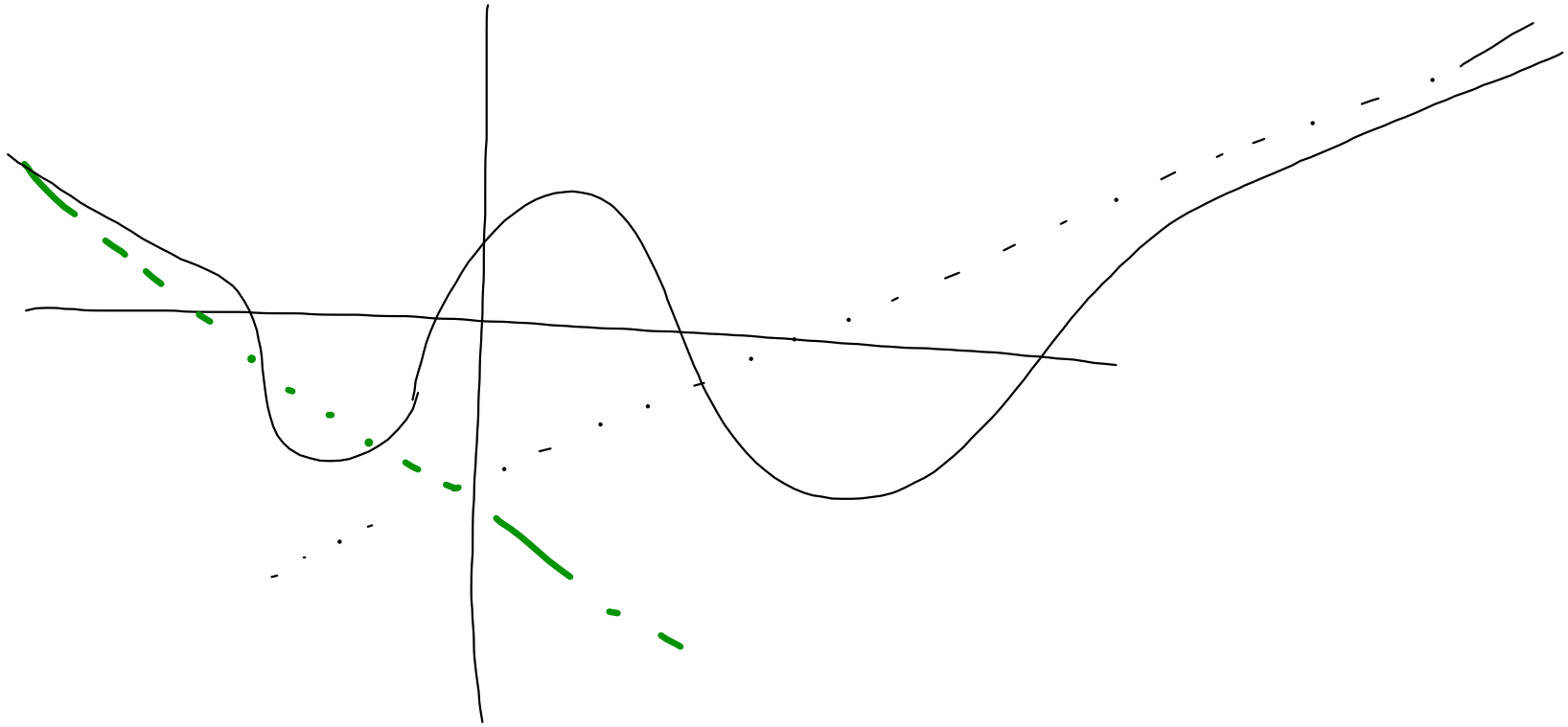
$$\lim_{x \to -1^-} \frac{1}{(1-x)\cdot(1+x)} = \left| \frac{1^-}{2\cdot(1+(1^-))} = \frac{1}{2\cdot 0^-} \right| = -\infty$$

$$(-1)^-$$

$$-1{,}1 + 1 = -0{,}1$$

$$\lim_{x \to -1^+} \frac{1}{(1-x)\cdot(1+x)} = \left| \frac{1}{2\cdot(1+(-1)^+)} = \frac{1}{0^+} \right| = +\infty$$

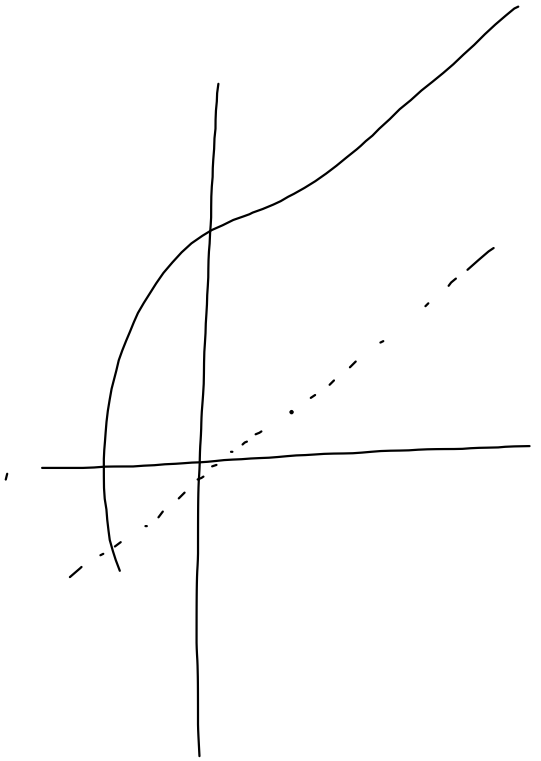




$y = ax + b$, $f(x)$

$$a = \frac{y}{x} = \lim_{x \to \infty} \frac{f(x)}{x}$$

$$b = y - ax = \lim_{x \to \infty} \left(f(x) - ax \right)$$



$$f(x) = \frac{P(x)}{Q(x)}$$

$x = -1^{+}|_{-}$

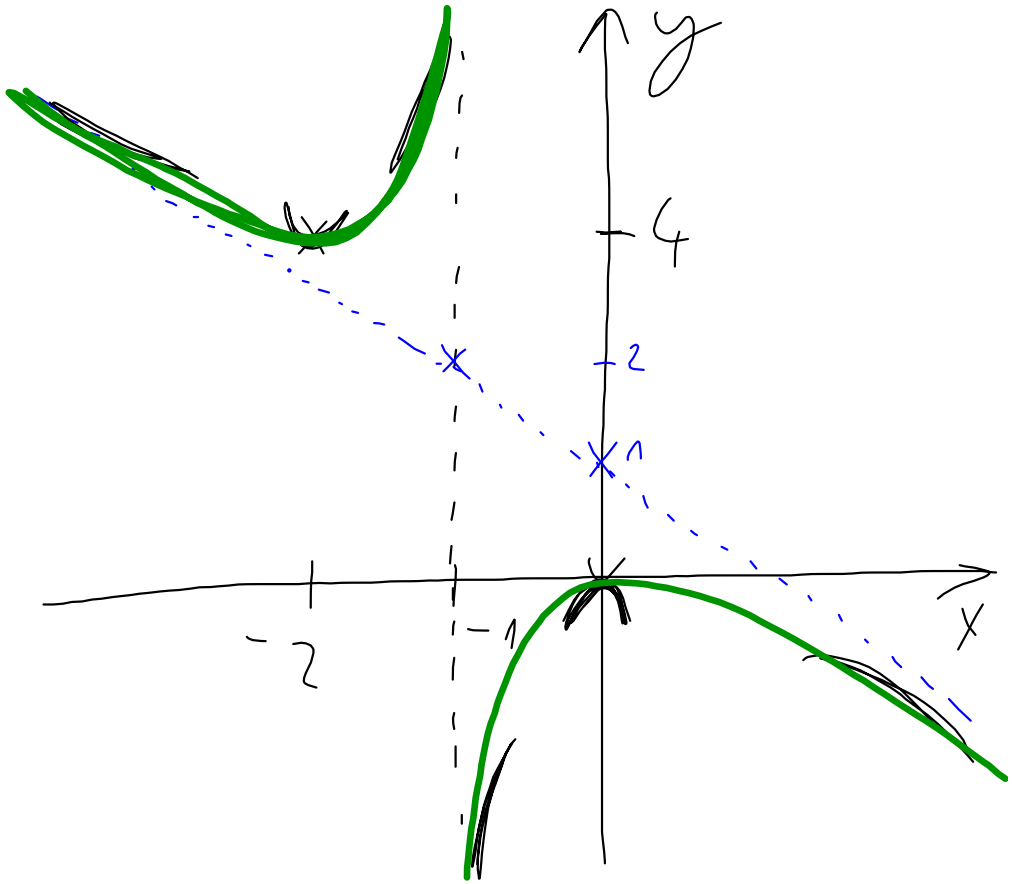
$y = -x + 1$

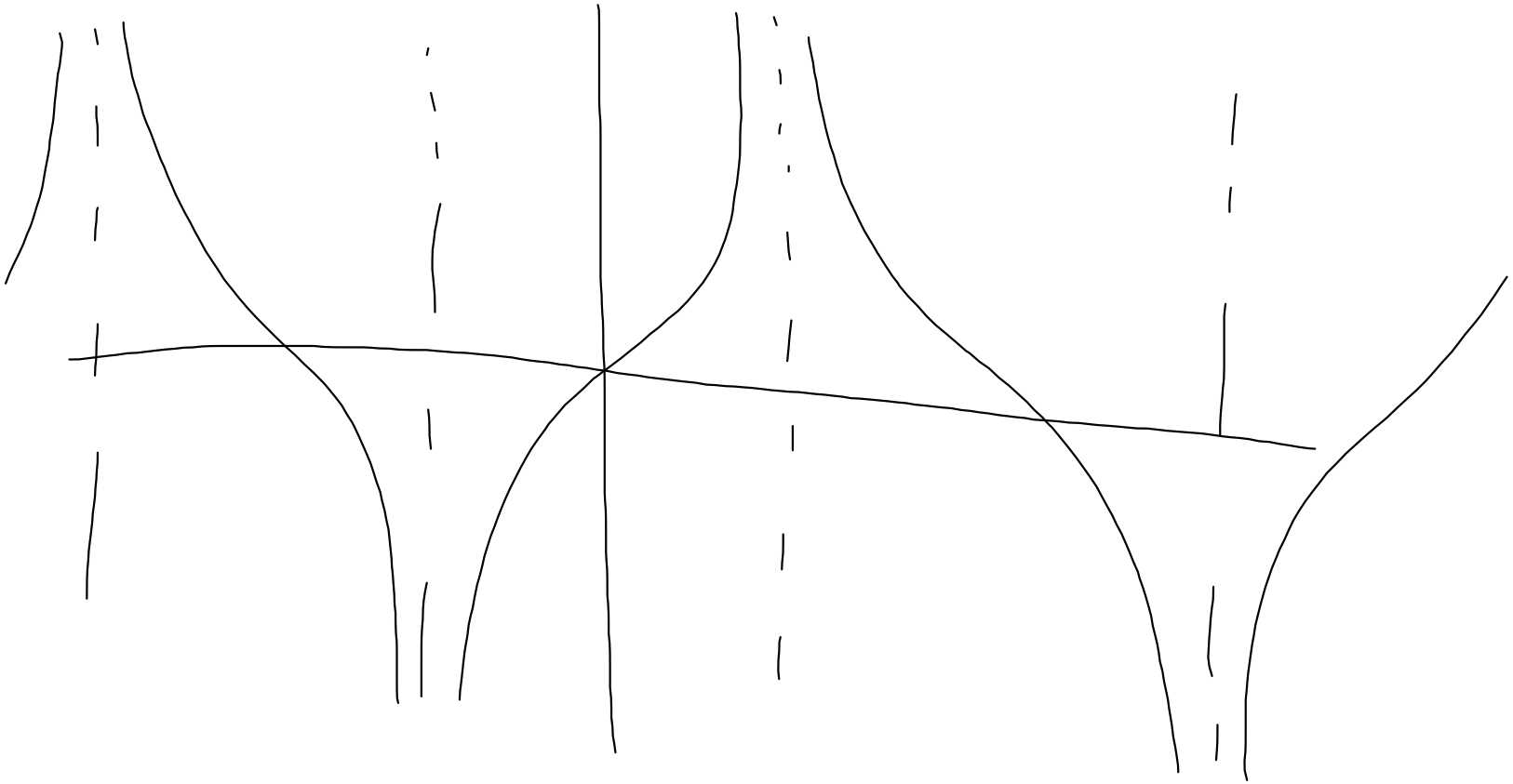
$x = 0 \Rightarrow y = 1$

$x = -1 \Rightarrow y = 2$

MIN. $[-2, 4]$

MAX. $[0, 0]$

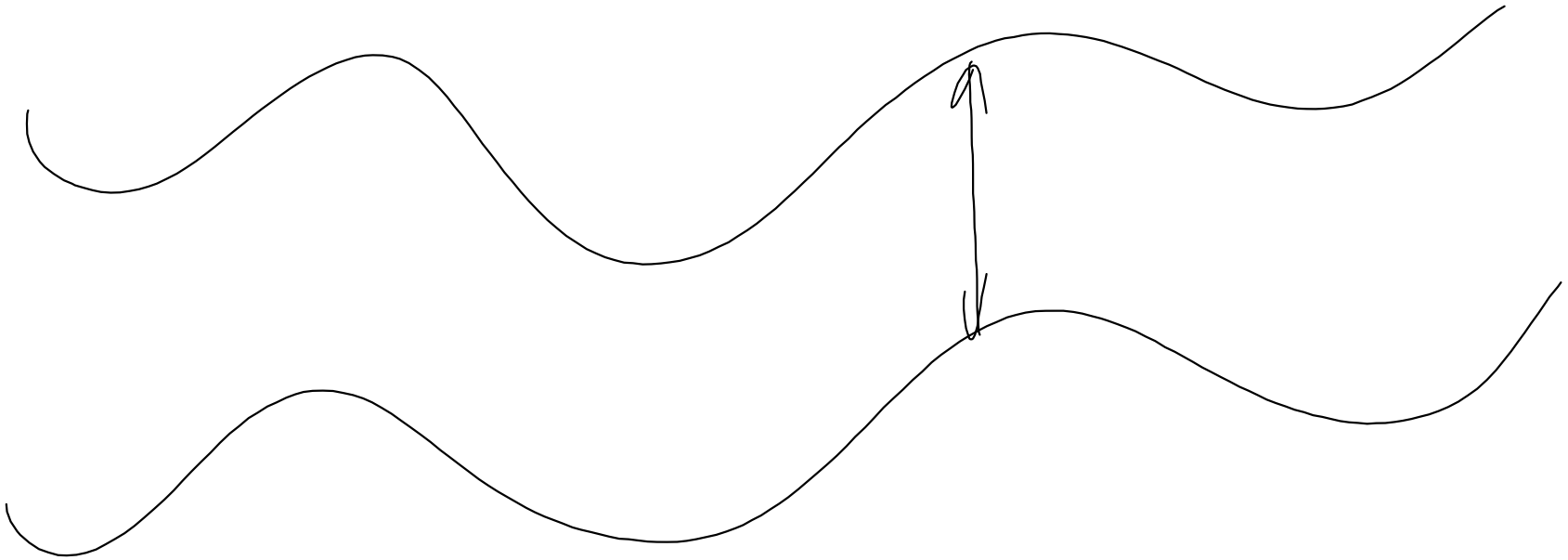




$$f(-x) = \ln\sqrt{\frac{1+\sin(-x)}{1-\sin(-x)}} = -f(x)$$

$$= \ln\sqrt{\frac{1-\sin x}{1+\sin x}} = \ln\sqrt{\left(\frac{1+\sin x}{1-\sin x}\right)^{-1}} =$$

$$= \ln\left(\sqrt{\frac{1+\sin x}{1-\sin x}}\right)^{-1} = (-1)\cdot \ln\sqrt{\cdots}$$



$$|x| = x \cdot \operatorname{sgn} x = \frac{x}{\operatorname{sgn} x} \quad (x \neq 0)$$