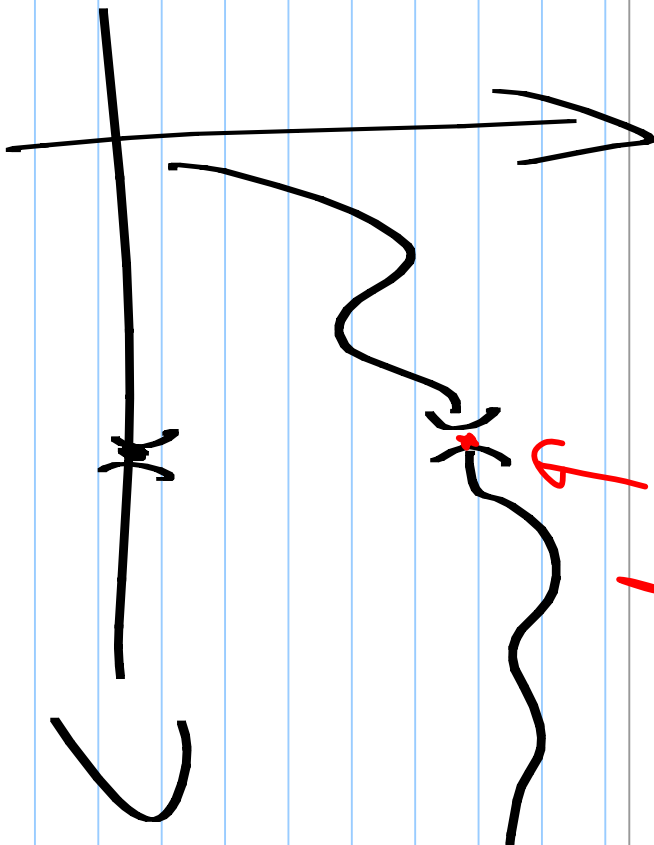
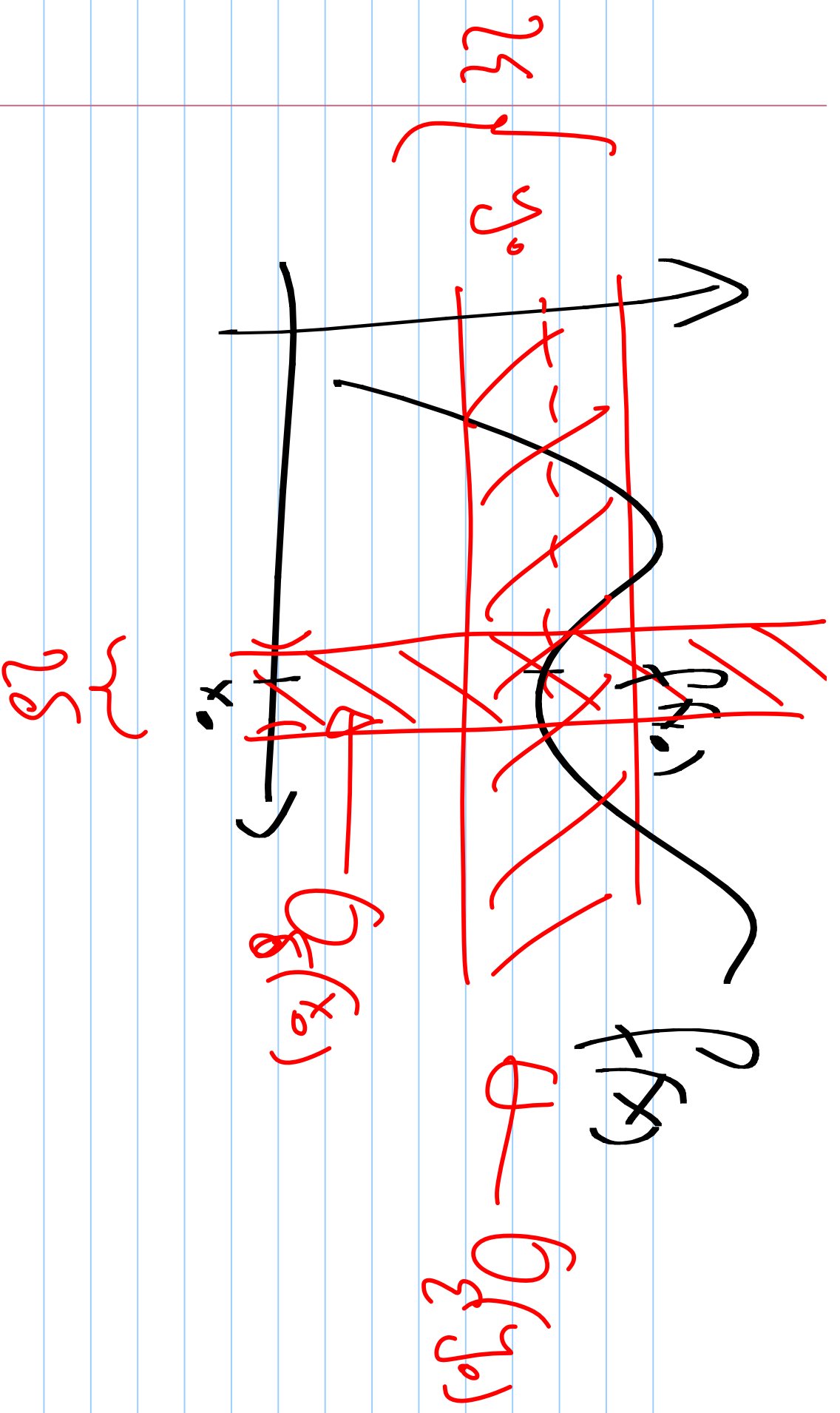


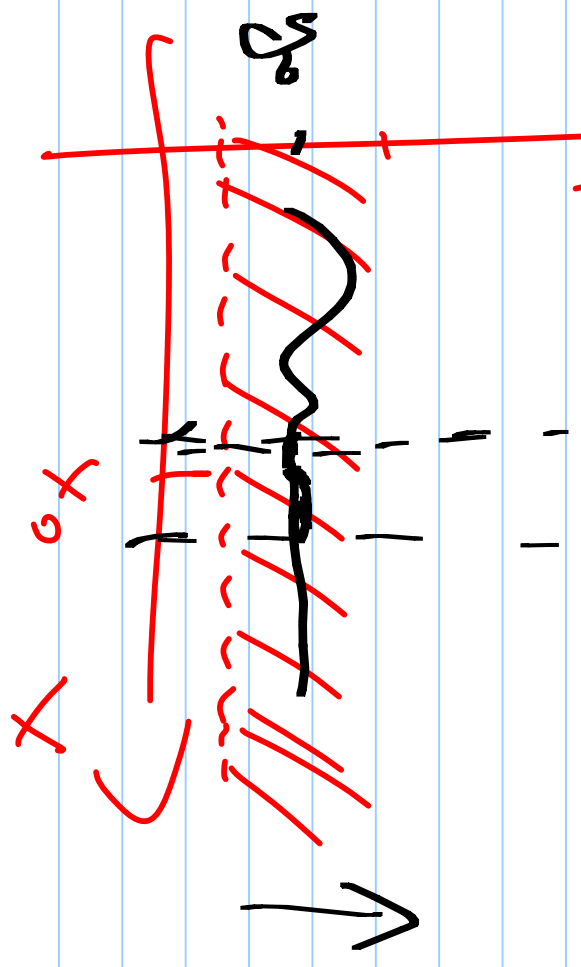
Sphbu' lute $x \rightarrow x_0 +$

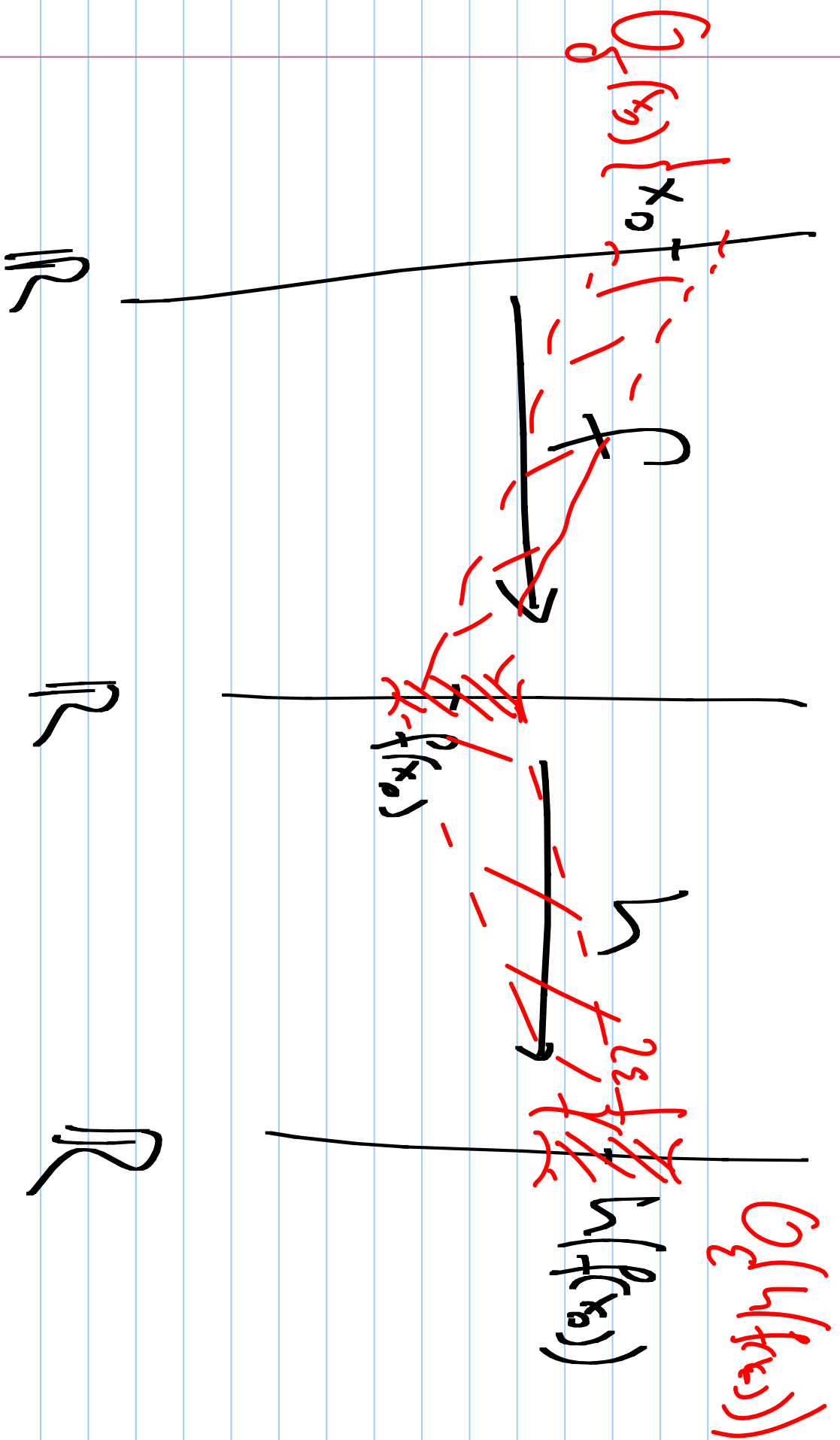


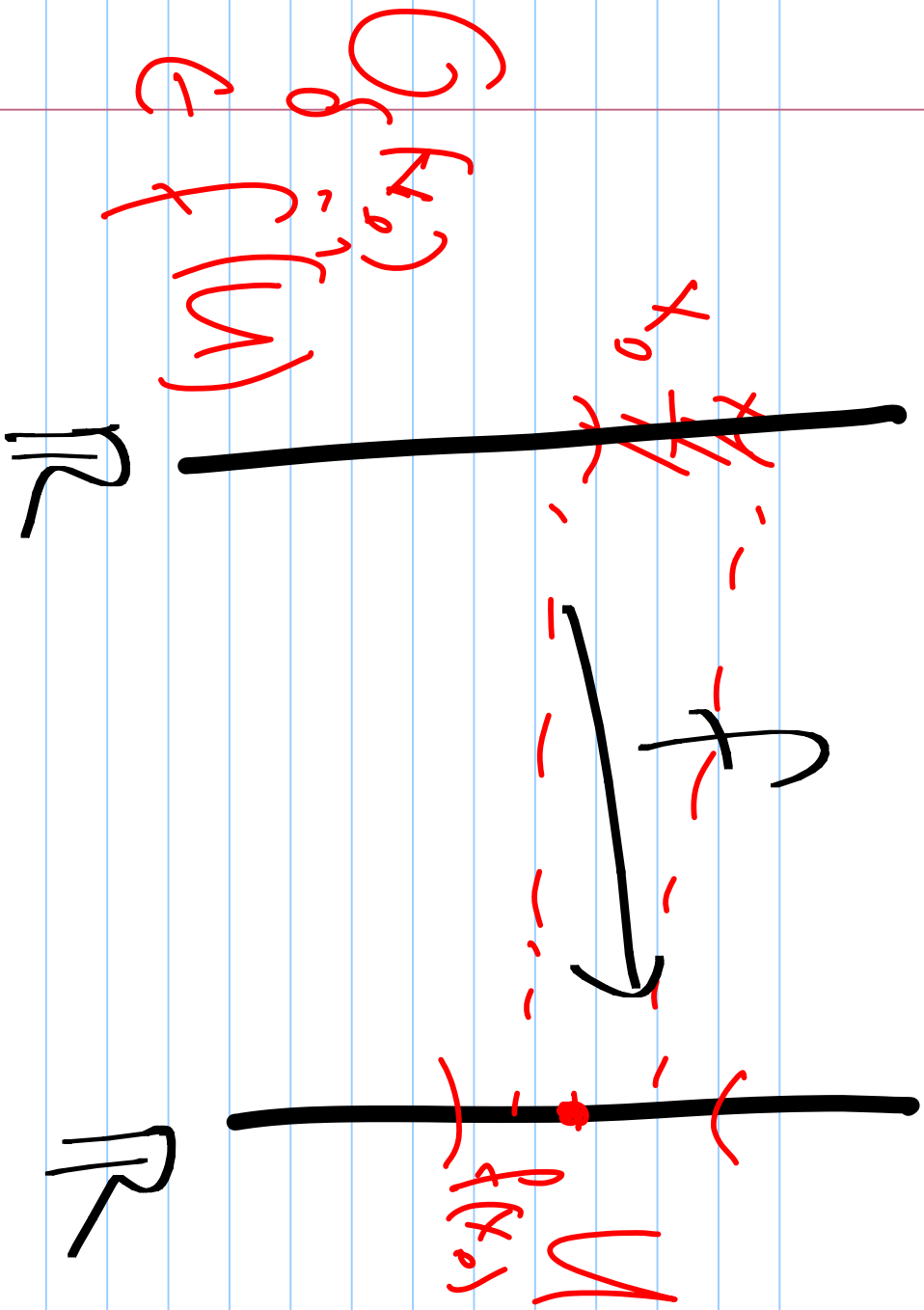
$$f(x_0) = \lim_{x \rightarrow x_0} f(x)$$



$$y = g(x)$$



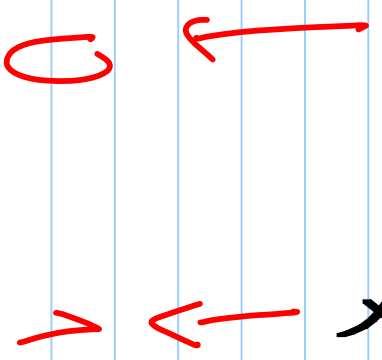




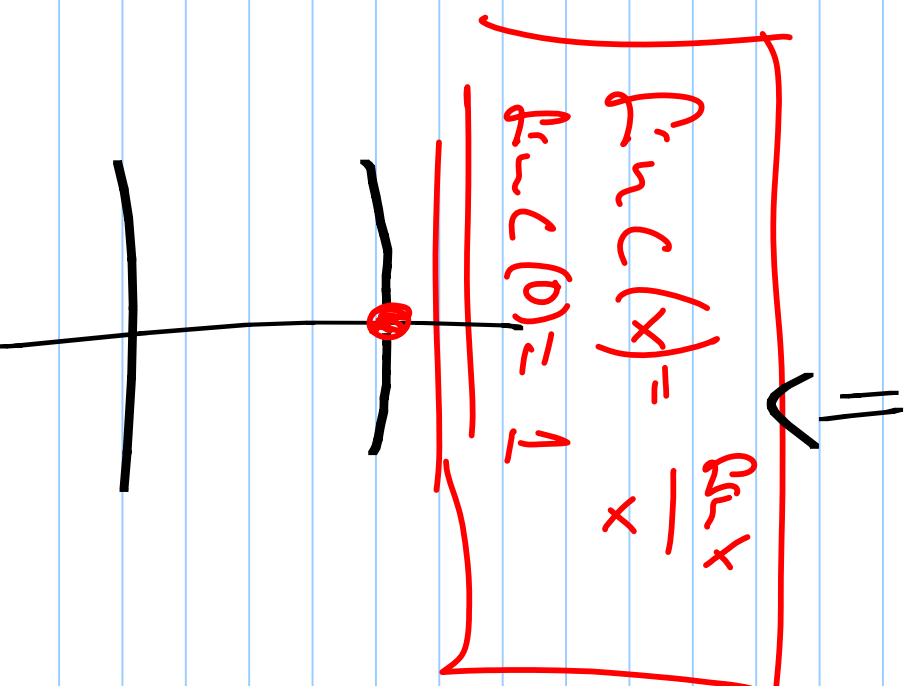
$$\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$$

$$\lim_{x \rightarrow 0} \frac{\sin^2 x}{x} =$$

$$= \lim_{x \rightarrow 0} \left(\sin x \cdot \frac{\sin x}{x} \right)$$



$$= 0$$



$$f(x) = (x^2 - 1) \text{ bzw. } \frac{2x-1}{x^2-1}$$

$$x \neq \pm 1$$

ex. mytische $f(x)$: wo $x = \pm 1$?

$$\lim_{x \rightarrow 1} f(x) = 0$$

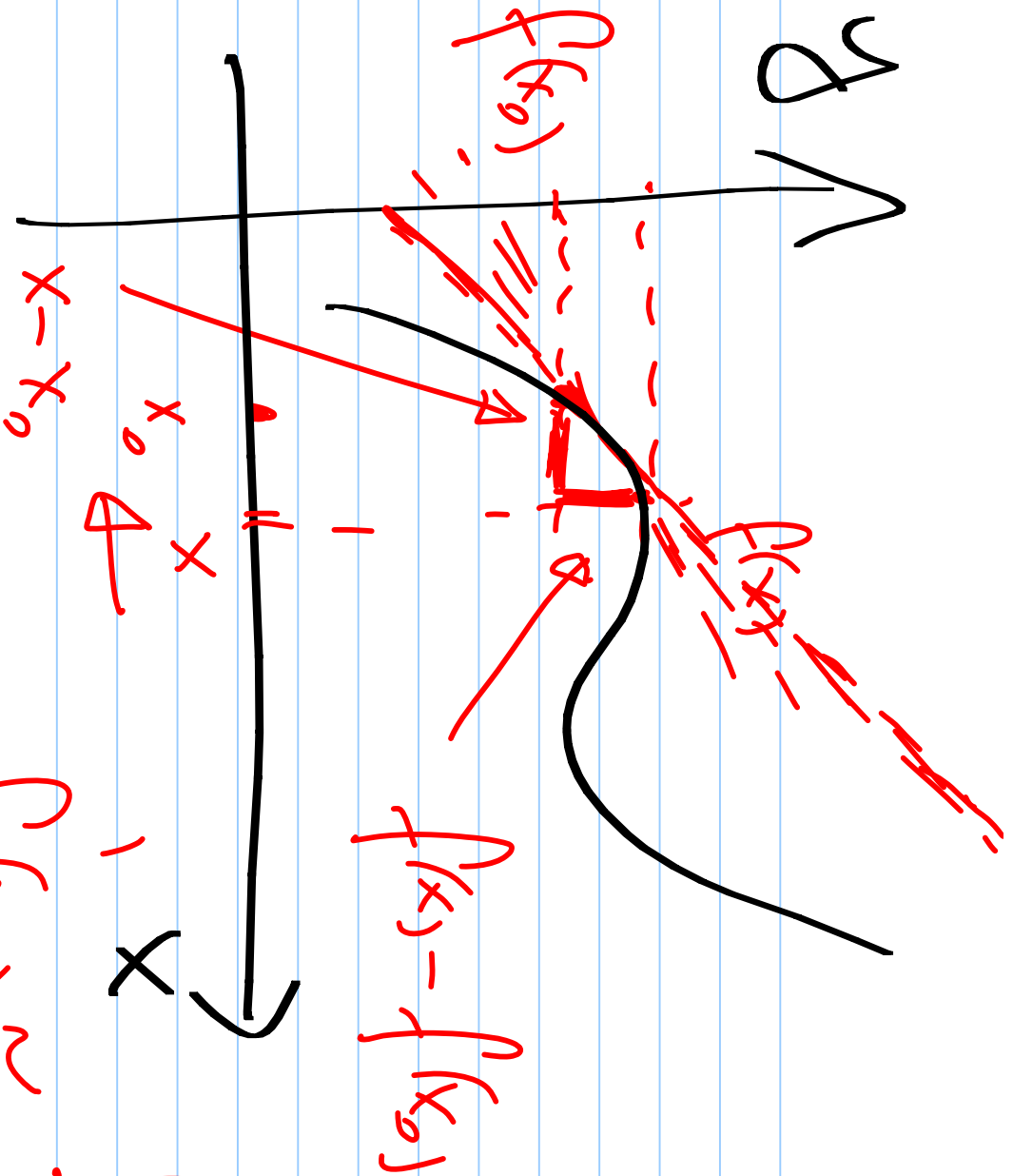
$$\left| \frac{2x-1}{x^2-1} \right| \leq 1 \Rightarrow -|x^2-1| \leq f(x) \leq |x^2-1|$$

0

\downarrow
 $x \rightarrow \pm 1$

0

\downarrow
 $x \rightarrow \pm 1$



$$f(x) - f(x_0) \approx \frac{f(x) - f(x_0)}{x - x_0} (x - x_0)$$