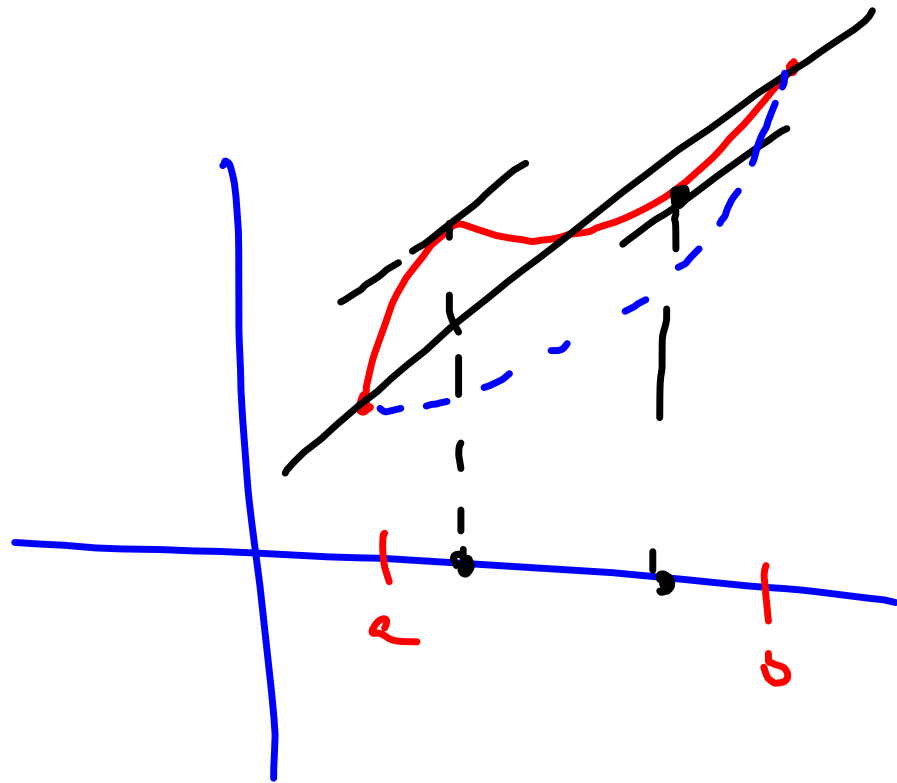
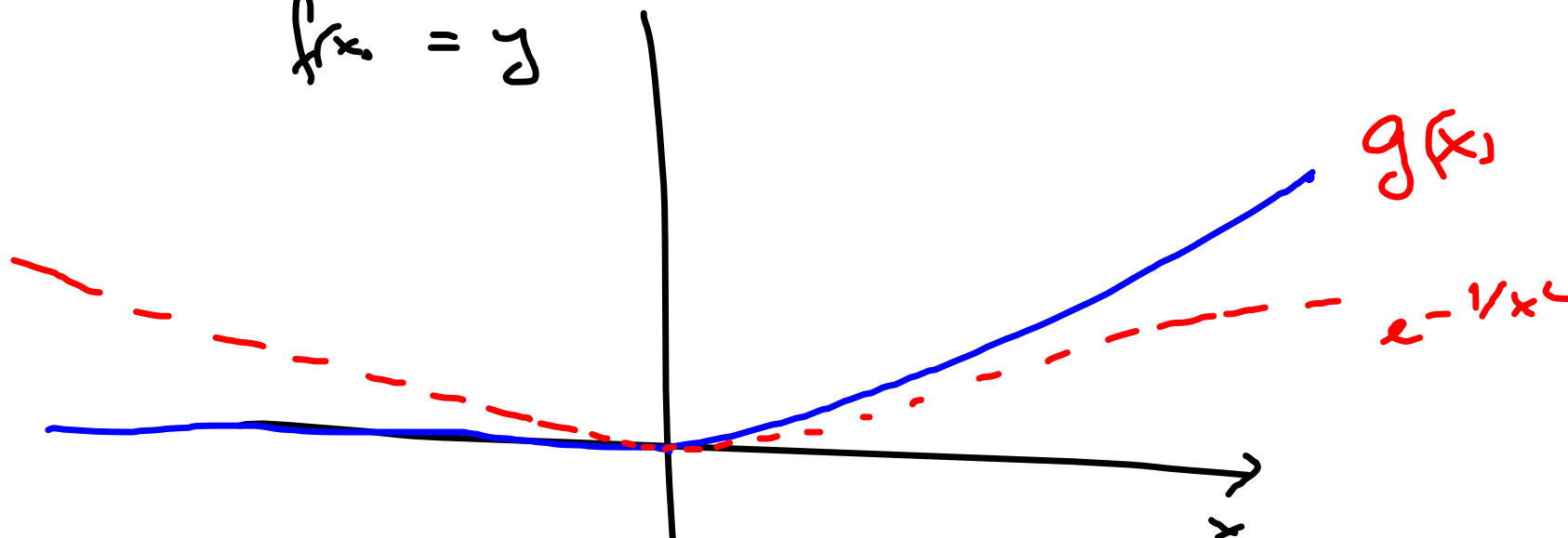


1



$$f(x) = f(c) + f'(c)(x - c)$$

$$f(x) = y$$



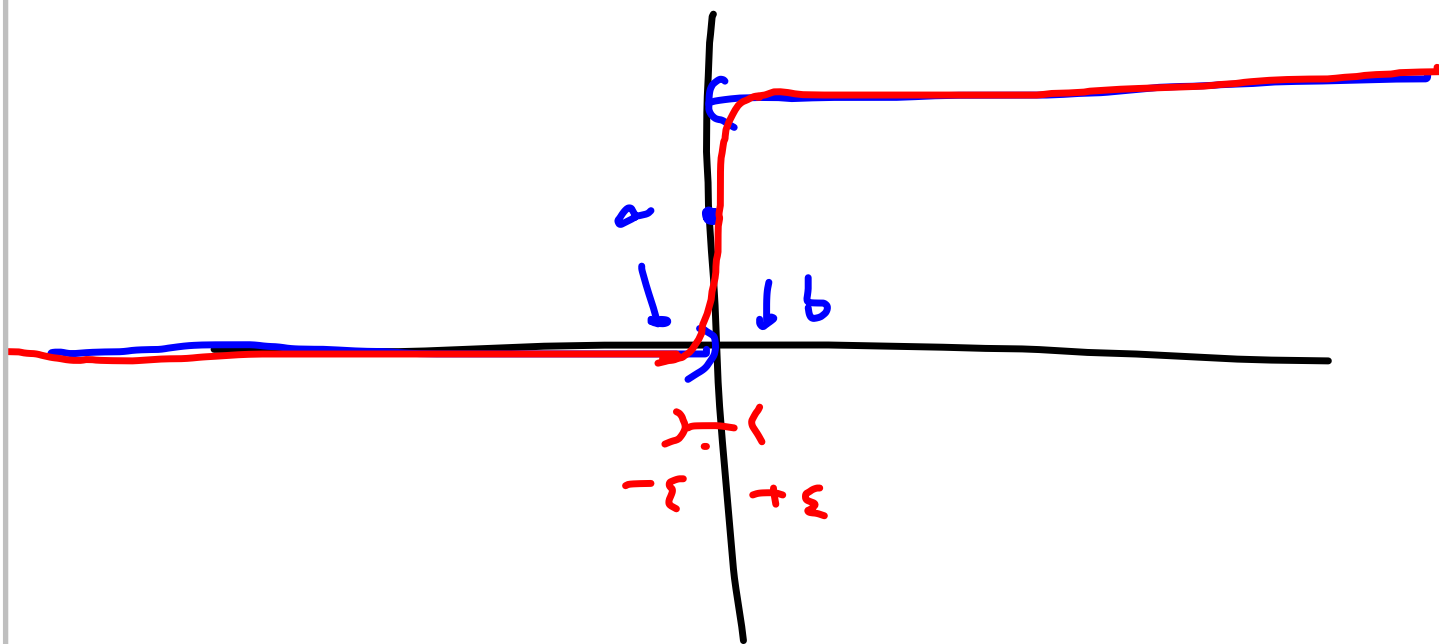
$$f(x) = e^{-1/x^2}$$

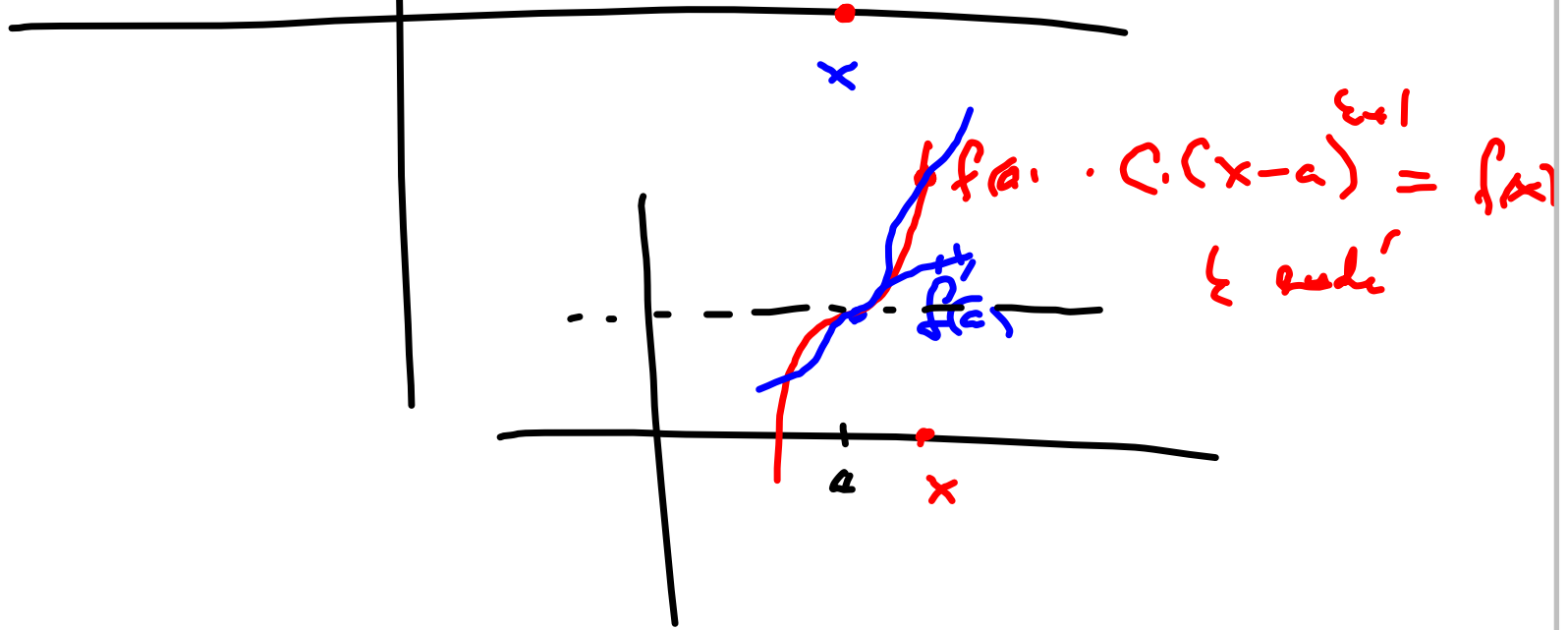
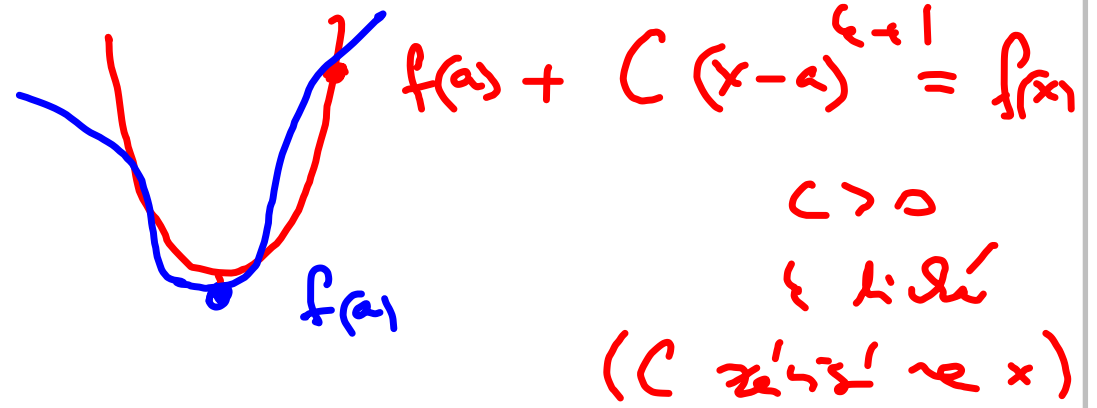
$$\lim_{x \rightarrow 0} f(x) = 0$$

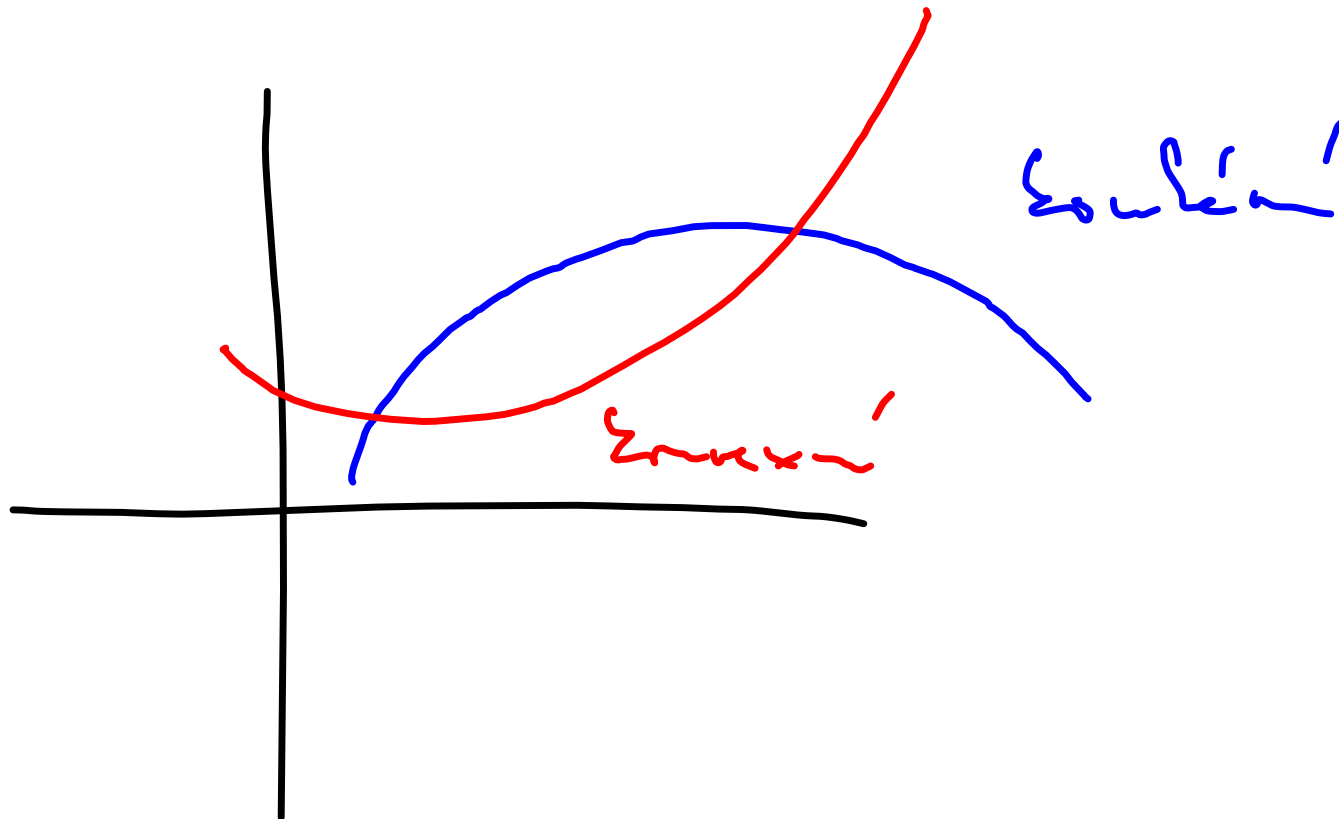
$$\begin{aligned} f'(x) &= e^{-1/x^2} \cdot 2x^{-3} \\ &= \frac{2x^{-3}}{e^{1/x^2}} \\ \text{derivate: } & -6x^{-4} / -2e^{1/x^2} \end{aligned}$$

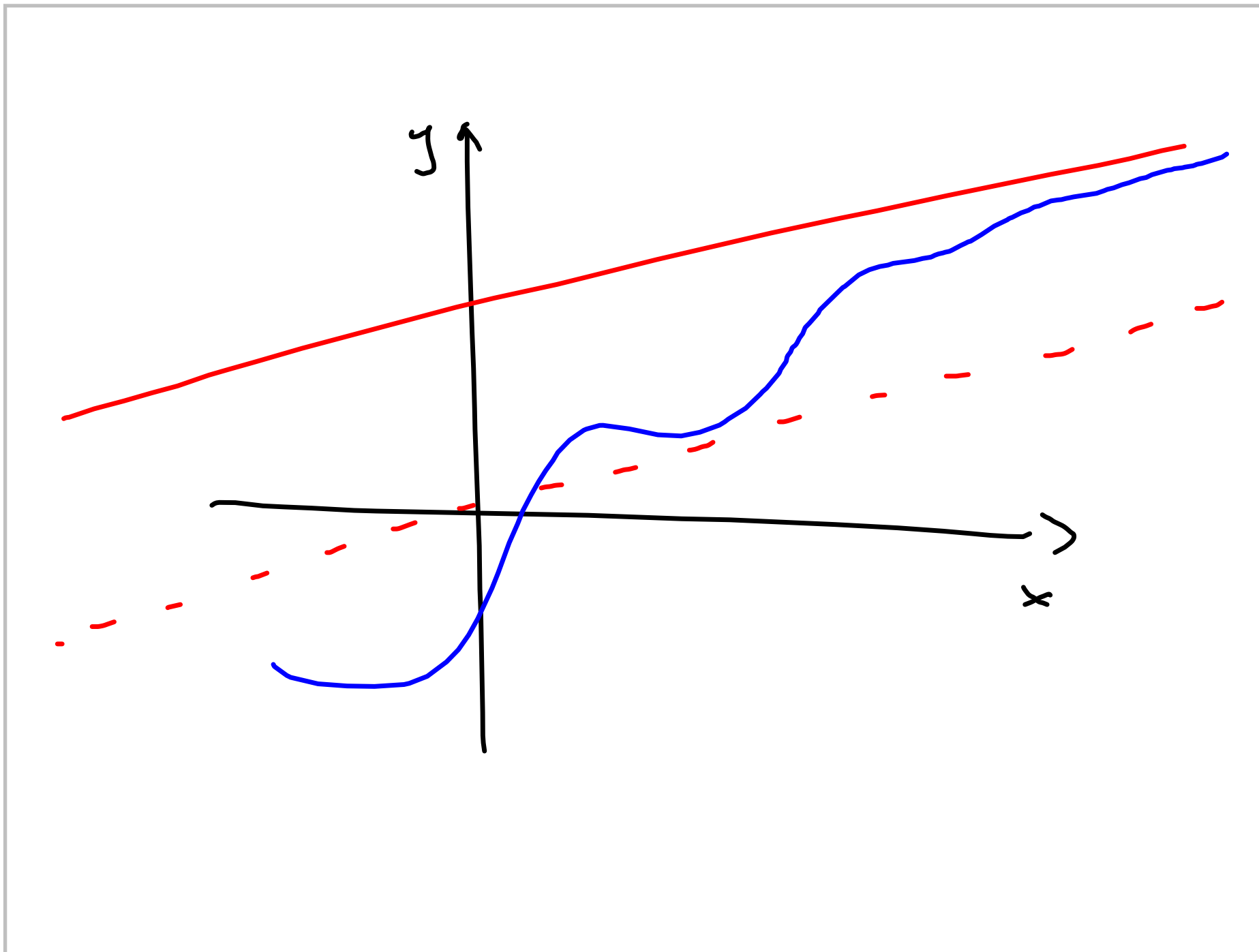
$$\frac{e^{-1/x^2}}{x^2}$$

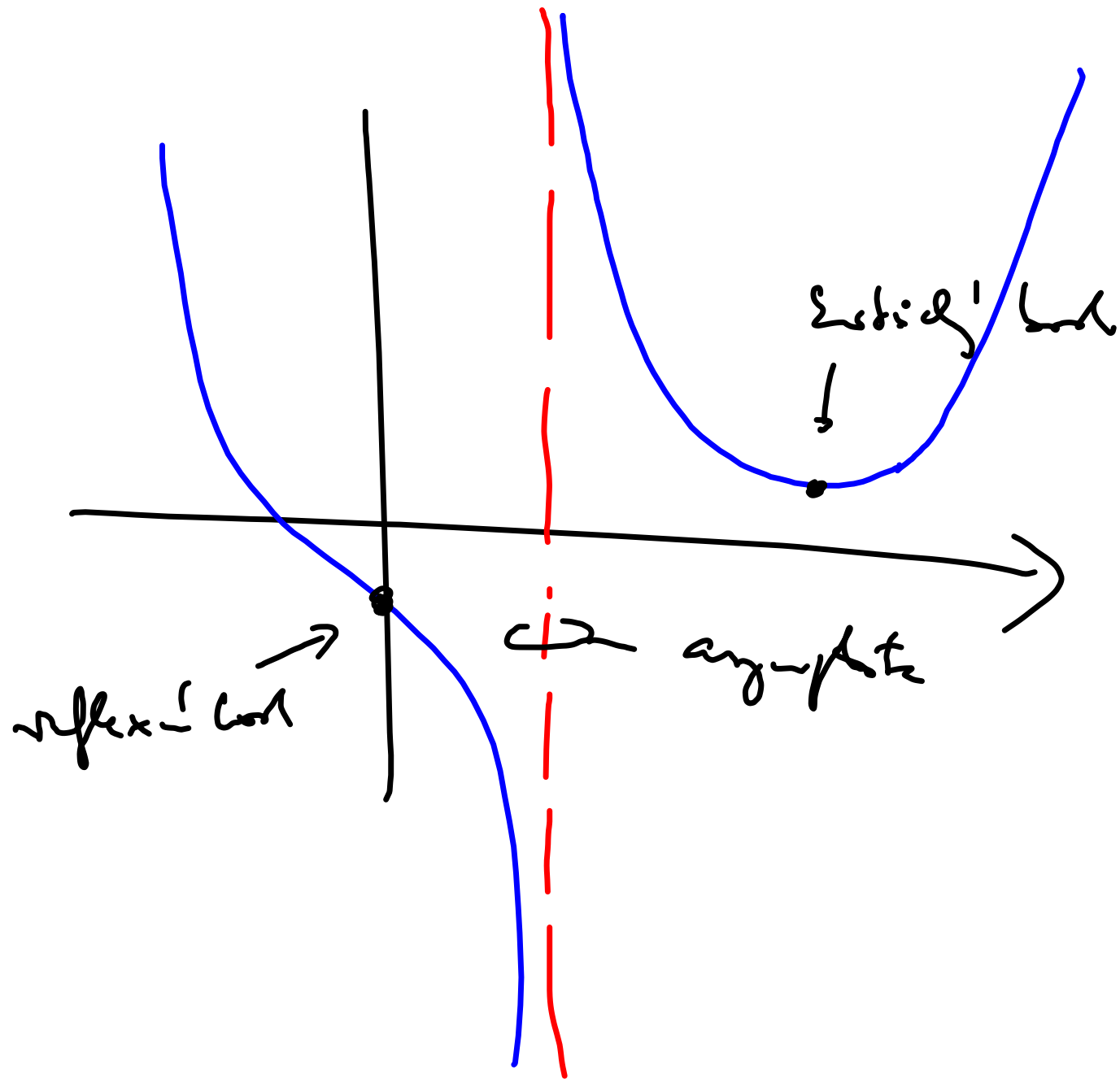
$$\frac{2 \cdot e^{-1/x^2} \cdot x^{-3}}{2 \cdot x^{2-1}} = \frac{2}{2} \cdot \frac{e^{-1/x^2}}{x^{2+2}}$$











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

$$f' = 0 \Rightarrow x^{-2} = 1 \Rightarrow 1 = x^2$$

$$x = \pm 1$$

$$f'' = 2x^{-3}$$

$$f''(1) = 2 \Rightarrow \text{lokální min.}$$

$$f''(-1) = -2 \Rightarrow \text{lokální max.}$$

$$f''(0) = 0 \leftarrow \text{úplně} \Rightarrow \text{bez reflexí}$$

$$\lim_{x \rightarrow \infty} \frac{f(x)}{x} = \lim_{x \rightarrow \infty} \left(1 + \frac{1}{x^2}\right) = \textcircled{1} \quad \text{bodů} \quad \textcircled{a=1}$$

$$\lim_{x \rightarrow \infty} \left(x + \frac{1}{x} - 1 \cdot x\right) = \lim_{x \rightarrow \infty} \frac{1}{x} = 0 \quad \textcircled{b=0}$$

