

$$f(x) = |x|$$

↓
ℝ

$$g(x) = \ln(1-x)$$

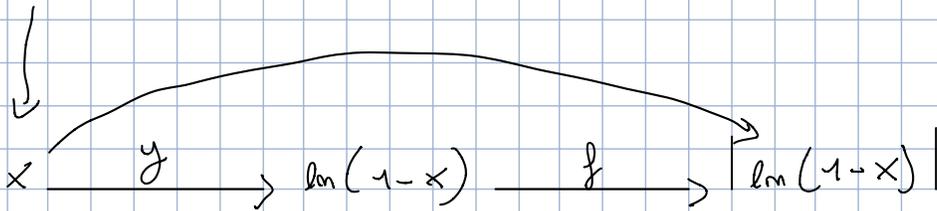
↖ 1-x > 0 x < 1

D_g (-∞, 1)

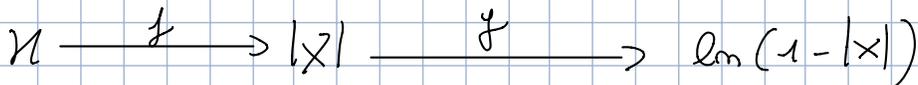
* insieme di
Perkento → ℝ

$$f \circ g$$

"olapa"



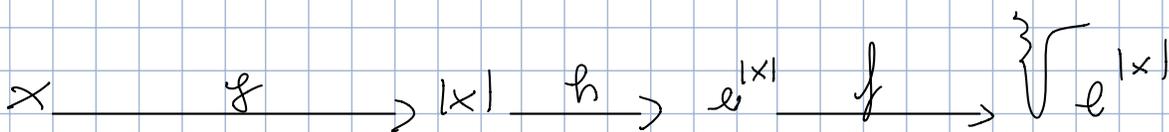
$$g \circ f$$



ES

$$f(x) = \sqrt[3]{x} \quad g(x) = |x| \quad h(x) = e^x$$

$$f \circ h \circ g = \sqrt[3]{e^{|x|}}$$



$$h \circ f \circ g \circ f$$

$$x \xrightarrow{g} |x| \xrightarrow{f} |x| \xrightarrow{f} \sqrt[3]{|x|} \xrightarrow{h} \sqrt[3]{|x|}$$

\swarrow coppia modulo
 \parallel
 $|x|$

ES

se f è pari o dispari

$$f(-x) = f(x) \quad \text{pari}$$

$$f(-x) = -f(x) \quad \text{dispari}$$

$$f(-x) \neq \pm f(x) \quad \begin{array}{l} \text{Né pari} \\ \text{Né dispari} \end{array}$$

Calcolo

$$\bullet (f \circ g)(x) = |\ln(1-x)|$$

$$(f \circ g)(-x) = |\ln(1+x)| \neq (f \circ g)(x) \quad \begin{array}{l} \text{Né pari} \\ \text{Né dispari} \end{array}$$

$$\bullet (g \circ f)(x) = \ln(1-|x|)$$

$$(g \circ f)(-x) = \ln(1-|-x|) = \ln(1-|x|) = (g \circ f)(x)$$

\bar{E} pari

Ex. Funktionen inverse

$$f(x) = \ln(2x+3)$$

$$y = \ln(2x+3)$$

$$2x+3 = e^y$$

$$2x = e^y - 3$$

$$x = \frac{e^y - 3}{2}$$

$$y = x^2 + 3$$

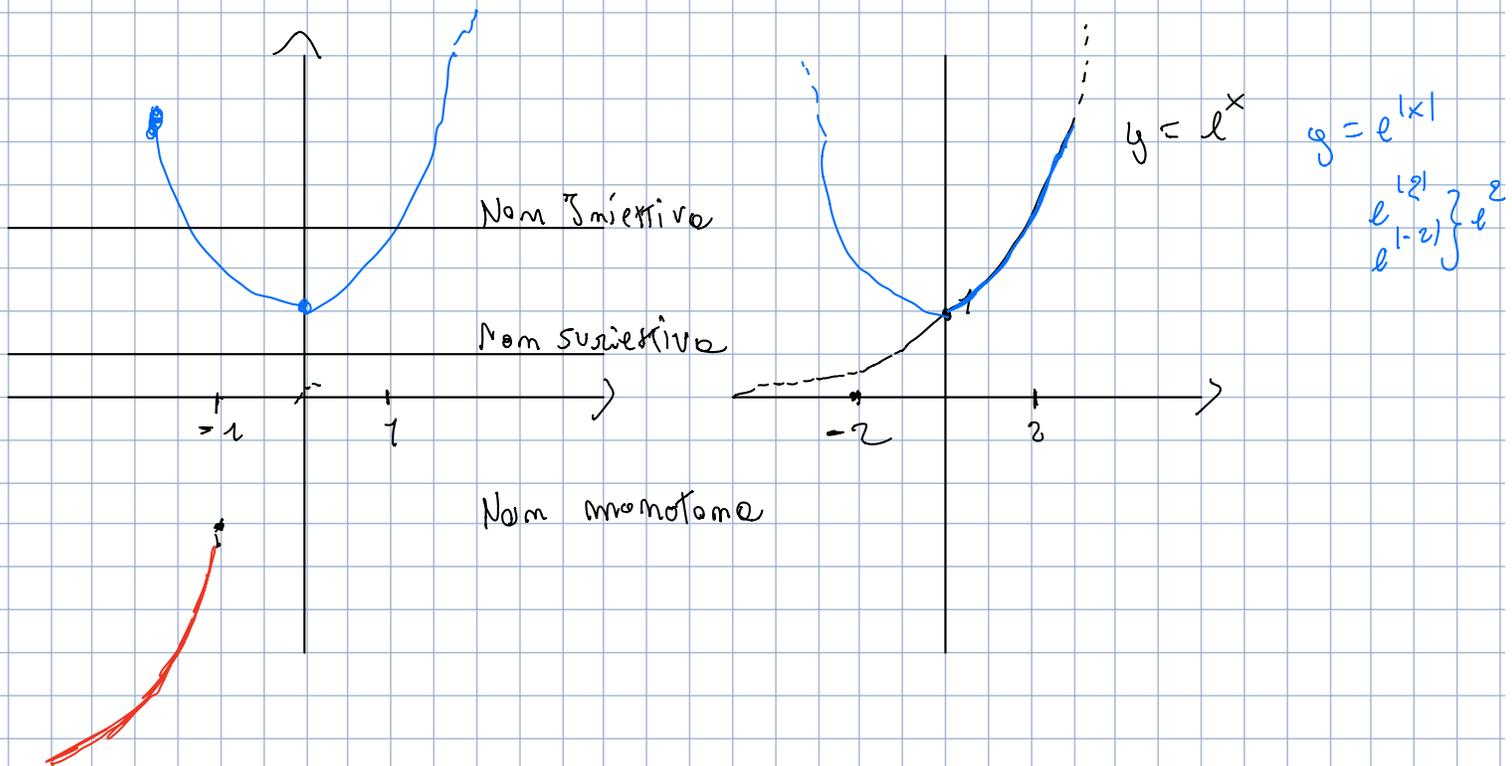
$$x^2 = y - 3 \quad x = \pm \sqrt{y-3}$$

$$S \begin{cases} +\sqrt{2} \\ -\sqrt{2} \end{cases}$$

Nom
funktionen!

Esercizio esame

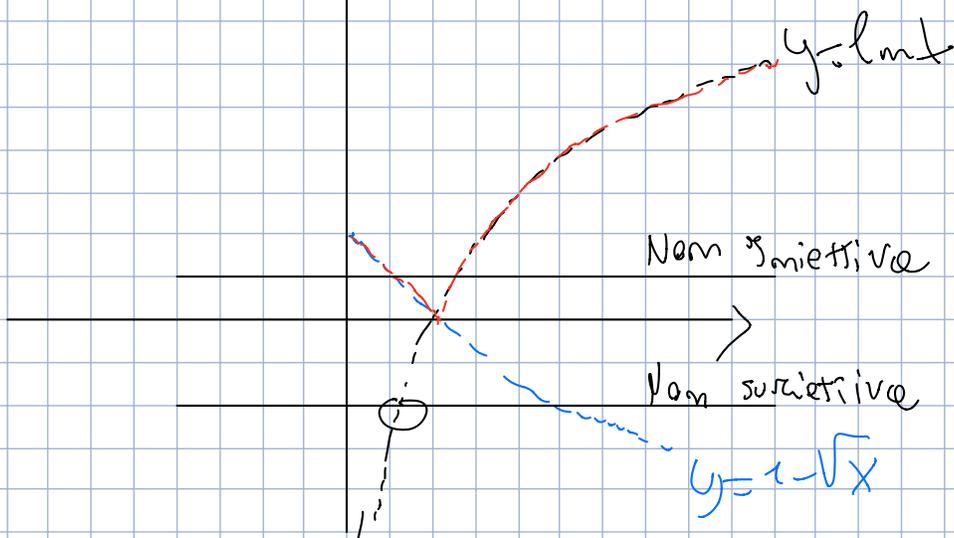
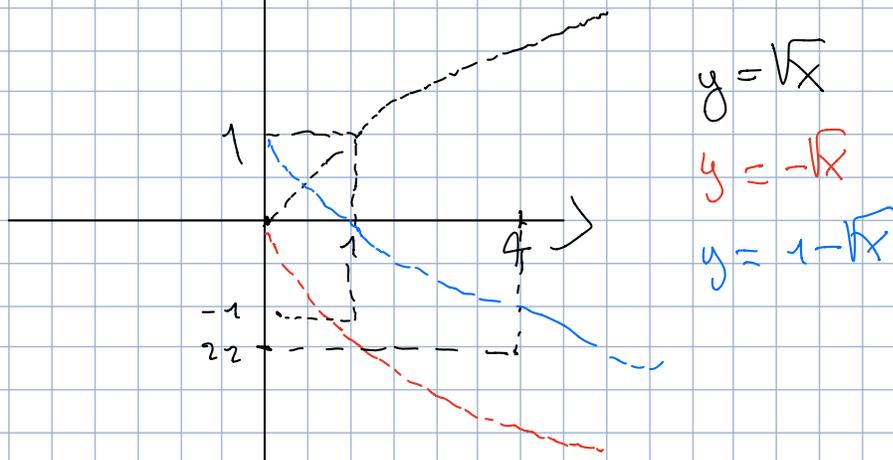
$$f(x) = \begin{cases} \underline{x^3} & x < -1 \\ \underline{e^{|x|}} & x \geq -1 \end{cases}$$



insieme Iniettivi $(-\infty, -1) \cup [1, +\infty)$

Es.

$$g(x) = \max \{ \underline{1 - \sqrt{x}}, \ln x \}$$



$$\text{Dom } f(x) = [0, +\infty)$$

$$A = \left\{ x \in \mathbb{R} \mid x = \frac{(-1)^n}{n+1}, n \in \mathbb{N} \right\}$$

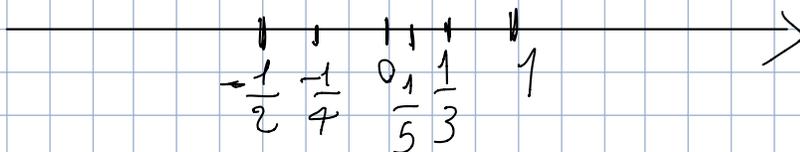
$$n=0 \rightarrow x=1$$

$$n=1 \rightarrow x = -\frac{1}{2}$$

$$n=2 \rightarrow x = +\frac{1}{3}$$

$$n=3 \rightarrow x = -\frac{1}{4}$$

$$n=4 \rightarrow x = +\frac{1}{5}$$



$$\inf A = -\frac{1}{2} = \min A$$

$$\sup A = 1 = \max A$$

$A' = \{0\}$
 punto
 di accumulazione