



$y = a^x \rightarrow \text{Dom } \mathbb{R}, \text{ Rec } (0, +\infty)$

$y = 3^x$

$y = -2^x$

$y = 3^{\sqrt{x}} \rightarrow \text{Dom} = [0, +\infty) \rightarrow \text{Rec} :$

x	$y = 3^{\sqrt{x}}$
0	1
1	3
4	$y = 3^{\sqrt{4}} = 3^2 = 9$

$b = x$

$b + x$

$a = a$

$\left(\frac{a}{b}\right)^x = \frac{a^x}{b^x}$

$y = \log_a x \rightarrow \text{Dom } (0, +\infty), \text{ Rec} = \mathbb{R}$

Ej 10:

$f(x) = -\log(x-1)$

$\text{Dom } f : x - 1 > 0$

$$x > 1$$

$$\Rightarrow \text{Dom } f = (1, +\infty) \checkmark \checkmark$$

$$\log_a 1 = 0$$

$$\log_{10} 10 \text{ ó } \log_a a = 1$$

$$\log_a a^x = x$$

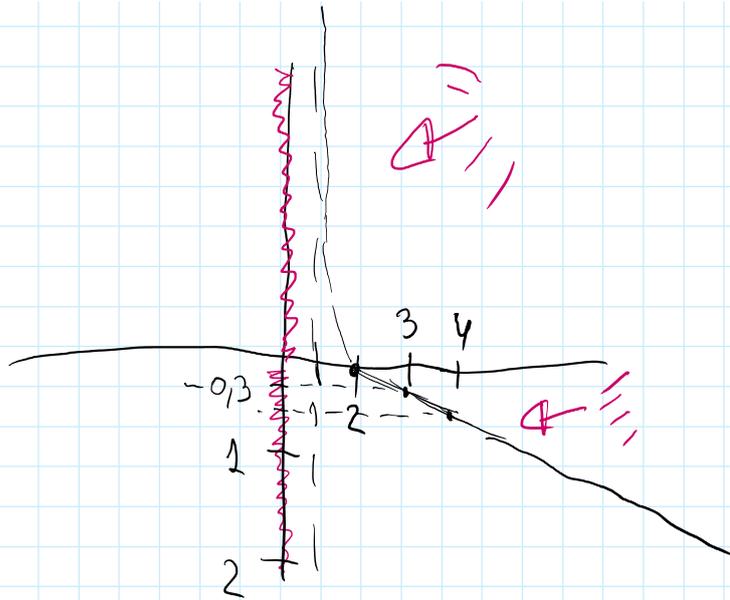
$$\log_a (u^{1/2}) = \frac{1}{2} \cdot \log_a u$$

$$f(x) = -\log(x-1), \quad x \in (1, +\infty)$$

$$y = -\log(x-1)$$

y	x
∞	1 0
0	2
-0,3	3
-0,47	4

10



— 0 —

$$\ln x = \log_e x$$

$$\ln x = y \Rightarrow e^y = x$$

$$f(x) = |\ln(x)| \begin{matrix} \nearrow + \\ \searrow - \end{matrix}$$

$$\ln(x) \Rightarrow x \in (0, +\infty)$$

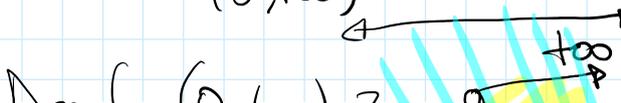
$$f(x) = \ln(x) \rightarrow y = \ln(x) > 0$$

$$\ln(|x|)$$

$$\ln(x)$$

$$f(x) = y = \ln(x) + 1$$

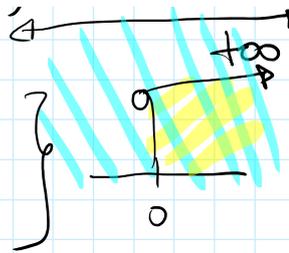
$(0, +\infty) \cap \mathbb{R}^+$
 $(0, +\infty)$



Dom f(x)

... (x)

$$\text{Dom } f_1 = (0, +\infty)$$
$$\text{Dom } g_1 = \mathbb{R}$$



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

$$f(x) = \underbrace{\sqrt{x-2}}_{f_1} - \underbrace{\ln(10-x)}_{f_2}$$

$$\sqrt{x-2} \in \mathbb{R}$$

$$\ln(10-x) \in \mathbb{R}$$

$$x-2 \geq 0$$

$$x \geq 2$$

$$10-x > 0$$

$$-x > -10 \quad | \cdot (-1)$$

$$x < 10$$

$$\rightarrow 10 > x$$

$$\downarrow$$
$$x < 10$$

$$\text{Dom } f(x) = \text{Dom } f_1 \cap \text{Dom } f_2$$
$$= [2, +\infty) \cap (-\infty, 10)$$
$$= [2, 10)$$

