

9/3/2018

PUNTO DELLA SITUAZIONE

ESPOENZIALE
IN BASE a

$$\boxed{\begin{matrix} a > 0 \\ a \neq 1 \end{matrix}}$$

$$y = a^x$$

$$x \mapsto a^x$$

$$\exp_a(x) = a^x$$

BIETTIVA

$$\exp_a: \mathbb{R} \rightarrow \mathbb{R}^+ \rightsquigarrow \text{INVERTIBILE}$$

$$a^x > 0 \quad \forall x \in \mathbb{R}$$

INVERSA

LOGARITMO
IN BASE a

$$y = \log_a x$$

$$x \mapsto \log_a x$$

$$\log_a: \mathbb{R}^+ \rightarrow \mathbb{R}$$

$$\begin{matrix} a > 0 \\ a \neq 1 \end{matrix}$$

$$b > 0$$

$$\log_a b = x \iff a^x = b$$

PARZO DA $\log_a b = x$, se \log_a e \exp_a sono l'una
l'inverso dell'altro, allora

applico \exp_a ad
entrambi i membri

$$a^{\log_a b} = a^x$$

↓

$$\exp_a(\log_a b) = \exp_a(x)$$

$$b = a^x$$

$\log_2 3$ = esponente da dare a 2 per ottenere 3

$$\log_2 3 = x \iff 2^x = 3$$

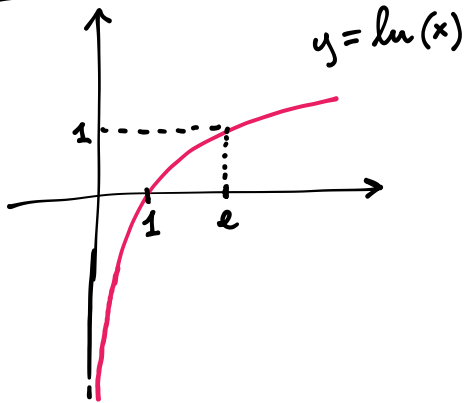
UN PO' DI GRAFICI

fig. 628 n 187

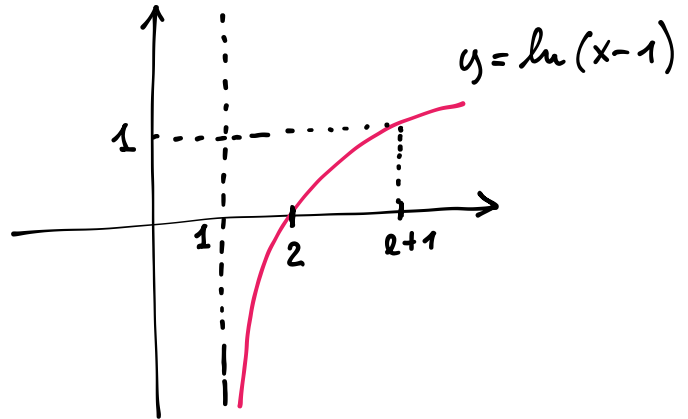
$e \approx 2,7$

DISEGNARE

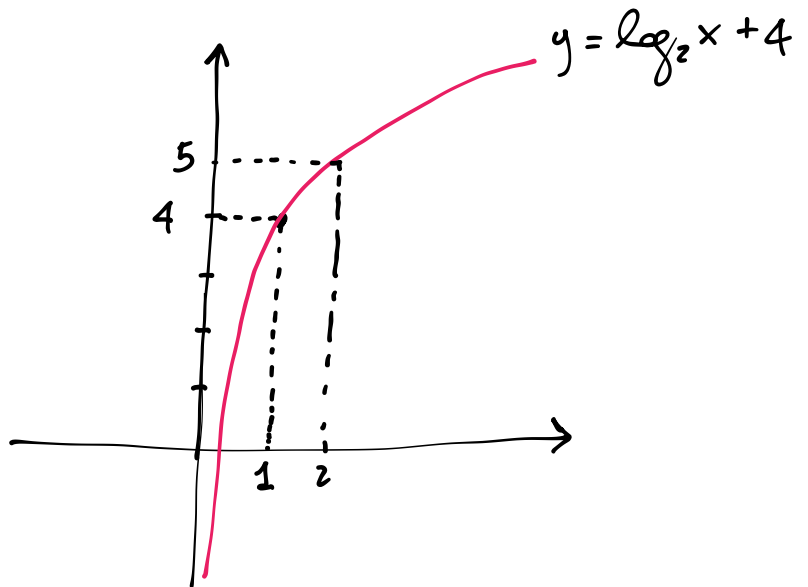
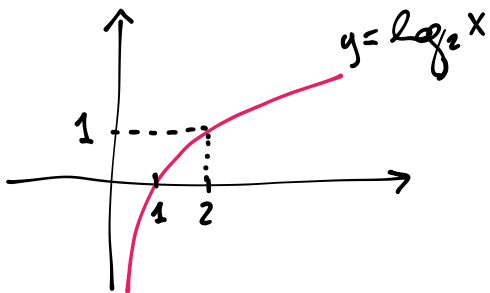
$$y = \ln(x-1)$$



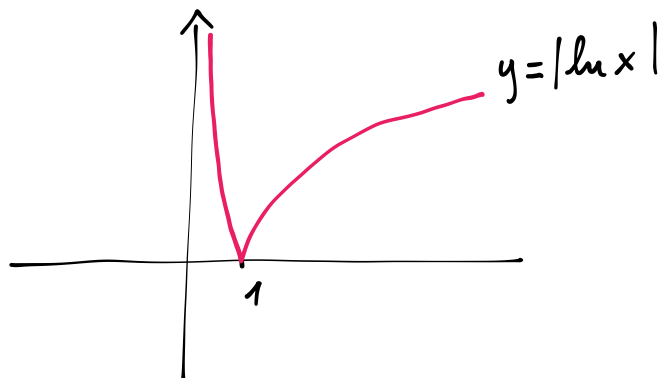
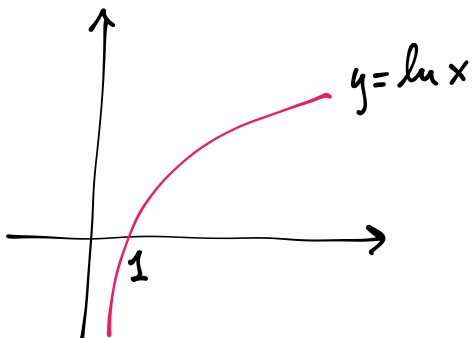
\Rightarrow spostare di 1 verso destra



$$y = \log_2 x + 4$$



$$y = |\ln x|$$



$$y = \ln|x|$$

