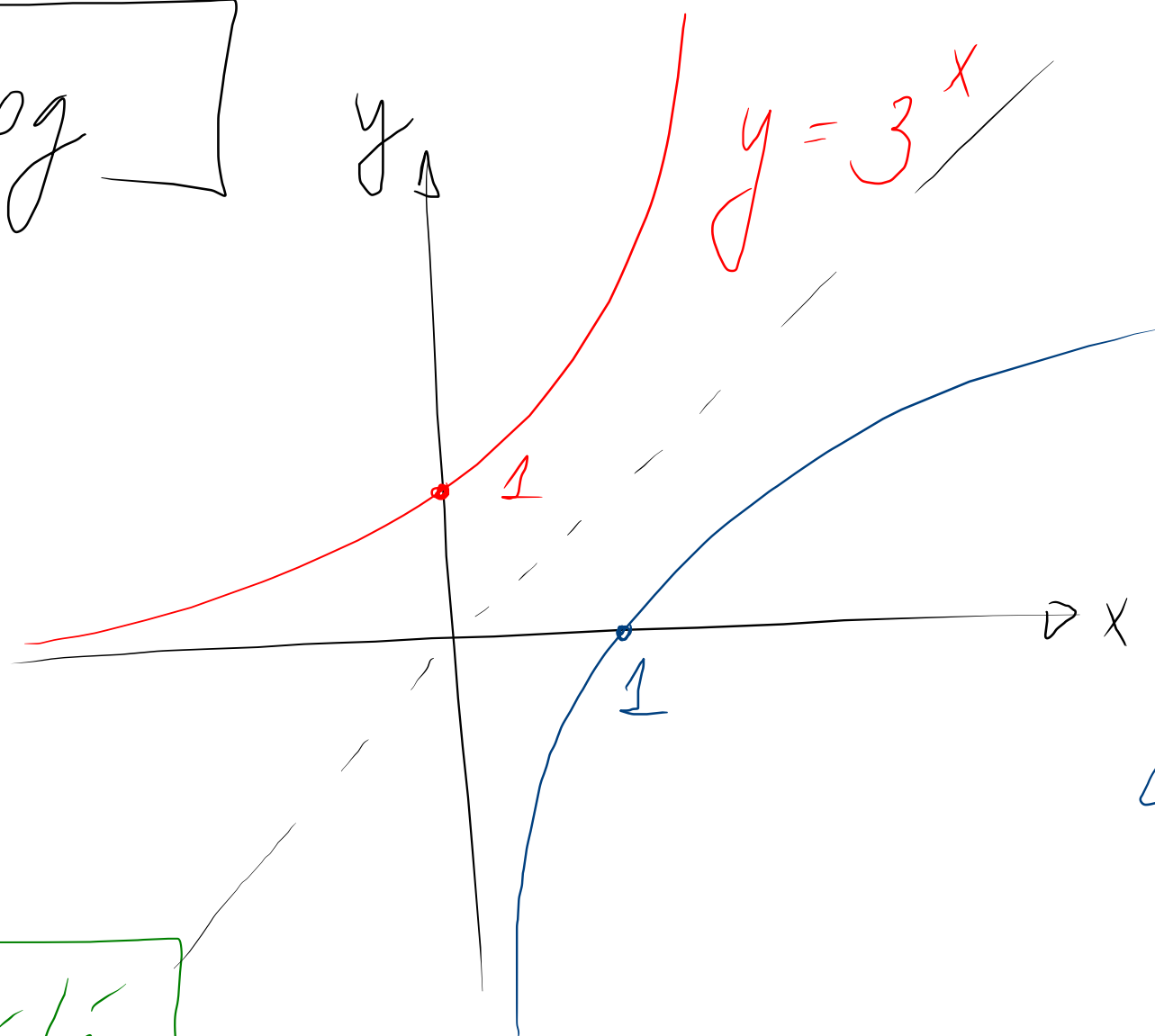


ExpLog



$\log_3 x$

LOGARITHMES

Propriété

$$3^x = 3^y$$

\Leftrightarrow

$$x = y$$

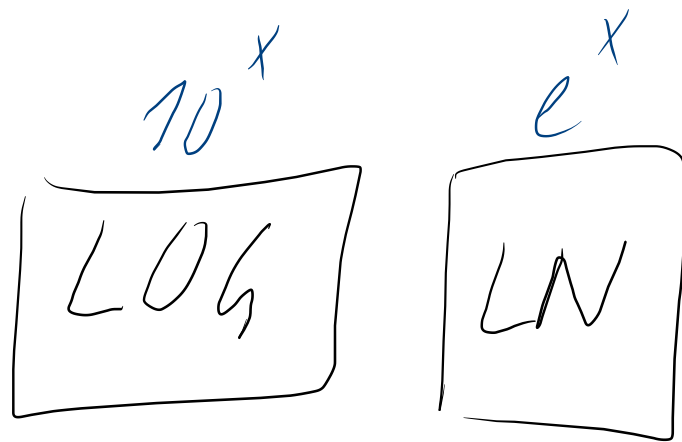
Calculer des logarithmes :

$$\log(3) \approx 0,4$$

$$\ln(3) \approx 1,09$$

$$\log(10) = 1$$

$$\log(100) = 2$$



↑
Base 10

↑
Base e = 2,718281...

log₁₀

log_e

$$\log_2(b)$$

base

Exemple:

$$2^3$$

$$= 8$$

\Leftrightarrow

$$\log_2(8) = 3$$

puissance à laquelle

élever 2 pour trouver b

CALCUL AVEC LA TI:

$$\log_2 8 = \frac{\text{LOG} 8}{\text{LOG} 2} = \frac{\text{LN} 8}{\text{LN} 2} = 3$$

$$\log \longrightarrow \log_{10}$$

$$\ln \longrightarrow \log_{2,72}$$

$$\log_2(u) = x \iff 2^x = u$$

puissance

$$\log_2(8) = 3 \iff 2^3 = 8$$

$$\log_2(x) = 5 \iff 2^5 = 32 = x$$

$$2^{\frac{3}{4}} \cdot 2^{\frac{4}{3}} = 2^{\frac{3}{4} + \frac{4}{3}} =$$

$$2^n \cdot 2^m = 2^{n+m}$$

$$3^x = 15 \quad \Leftrightarrow \quad x = \log_3 15$$

$$\log_3 15 = \frac{\ln 15}{\ln 3} = \frac{\log 15}{\log 3}$$