

Explog : équations

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

↑
puissance à laquelle élever 2

pour trouver u

Examples

$$3x - 2 = 2 - x$$

CL

$$4x = 4$$

↓ ÷ 4

$$x = 1$$

$$x^2 - 1 = 0$$
$$x^2 = 1$$
$$x = \pm 1$$

$$X^3 = 10$$

$$X = \sqrt[3]{10}$$

Racines

← SORTIR LE X DE LA PUISSANCE →

Log

$$3^x = 5$$

⇔

$$\log_3(5) = x$$

$$2^x = u$$

⇒

$$\log_2(u) = x$$

$$\log_3 5 = \frac{\log 5}{\log 3}$$

$$= \frac{\ln 5}{\ln 3}$$

4.3 b)

$$5^{2x} = 456.35$$

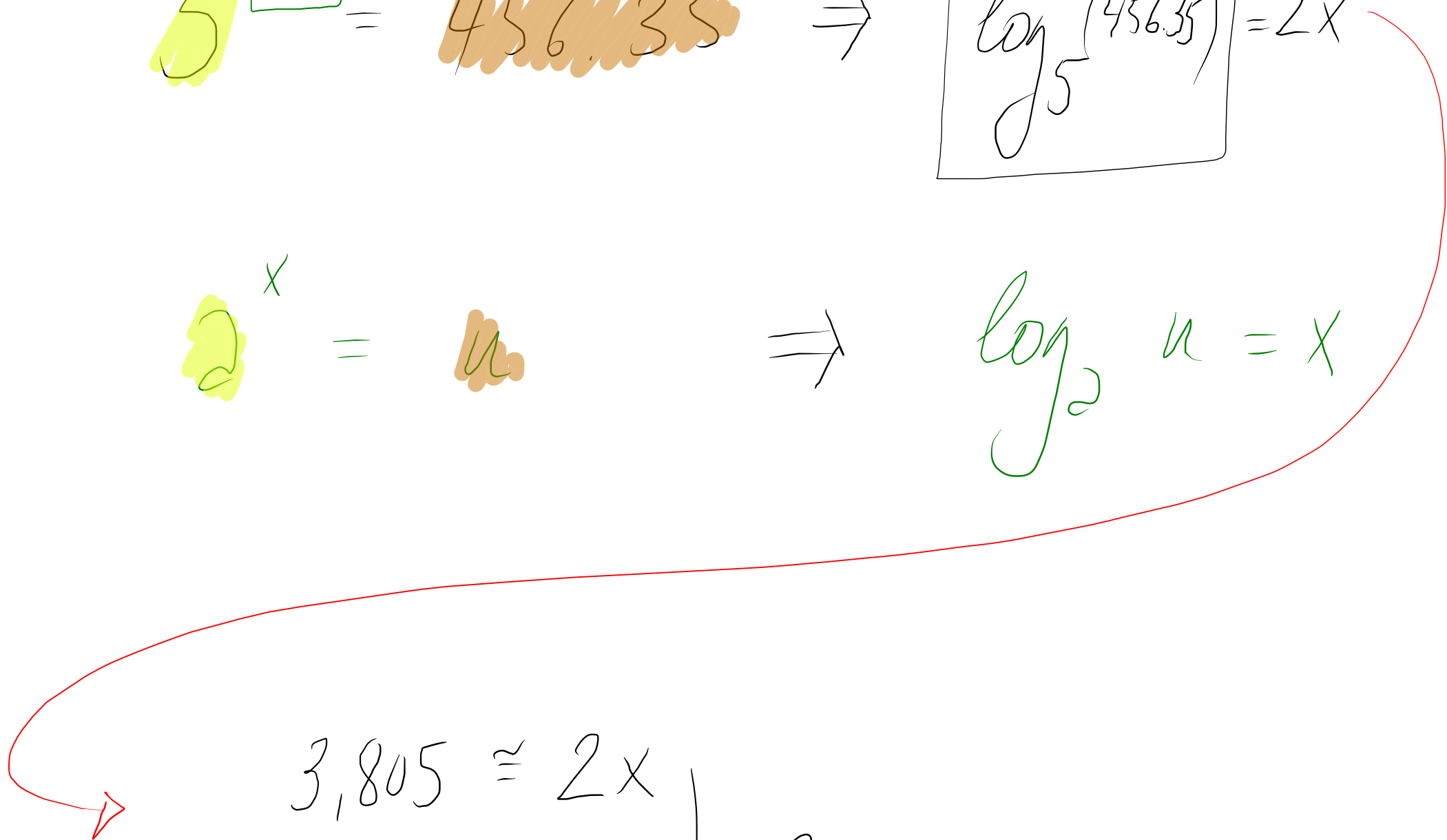
\Rightarrow

$$\log_5(456.35) \approx 3.805 = 2x$$

$$2^x = u$$

\Rightarrow

$$\log_2 u = x$$



$$3.805 \approx 2x$$

$\div 2$

$$1.9025 \approx x$$

$$\frac{e^{x+1}}{100} = 20$$

$$e^{x+1} = 2000$$

$$2^x = u$$

\Leftrightarrow

$$\log_2 u = x$$

$$7,6 \approx x+1$$

$$\ln 2000 = x+1$$

$$\log_e 2000 = x+1$$



$$7,6 \approx x+1$$

$$6,6 \approx x$$

-1

$$g^{2x+1} = 1$$

$$g^{2x+1} = g^0$$

$$2^x = 2^y \Rightarrow x = y$$

$$2x+1 = 0$$

$$2x = -1$$

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

-1

÷ 2