

100%
algébrique

100%
LM
COMPLIANT

$$3^{(9+x)} = x^x$$

$$x \in \mathbb{R}$$



----- Q U E S T I O N -----

$$3^{(9 + x)} = x^x$$

$x = ?$ (x appartient à \mathbb{R})

----- R É P O N S E -----

$$3^{(9 + x)} = x^x$$

$$3^9 \cdot 3^x = x^x$$

$$(3^9 \cdot 3^x) / (3^x) = (x^x) / (3^x)$$

$$3^9 = (x/3)^x$$

$$(3^9)^{(1/3)} = ((x/3)^x)^{(1/3)}$$

$$3^{(9/3)} = (x/3)^{(x/3)}$$

$$3^3 = (x/3)^{(x/3)}$$

rappel: $a^a = b^b \Rightarrow a = b$

$$x/3 = 3$$

$$x/3 = 3/1 \Rightarrow 1 \cdot x = 3 \cdot 3 \text{ (produits en croix)}$$

$$\begin{array}{c} \text{-----} \\ | \quad x = 9 \quad | \\ \text{-----} \end{array}$$