

Linear Equation

- $7x + 17 = 4$
- $2\left(\frac{4x}{5} - 1\right) = 6$
- $\frac{3-x}{4} = \frac{9\left(x + 7\right)}{10} + 1$

Exponential

- $a^0 =$
- $a^2 * a^3 =$
- $\frac{a^2}{a^3} =$
- $a^n + a^n =$
- $2a^n - 5a^n =$
- $a^{-1} =$
- find the value of x: $2^x = \frac{1}{8}$

Logarithmic

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

exponents and logarithms :

- $3^2=9 \iff$

- $3 = \log_4(64) \iff$

Logarithmic law

Logarithmic laws

For any $a, x, y > 0, a \neq 1$, the laws are:

- $\log_a(x) + \log_a(y) = \log_a(xy)$
- $\log_a(x) - \log_a(y) = \log_a\left(\frac{x}{y}\right)$
- $\log_a(x^n) = n \log_a(x)$
- $\log_a(a) = 1$
- $\log_a(1) = 0$

Evaluate; let $x = \text{unknown}$

- $\log_6(216) =$
- $2\log_3(27) =$
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