

Expression Isolation

$isolate(eq, expr)$

try to isolate expr in the eq.

$appVersion(4) = "0.99.7921.69"$

$eq := c \cdot t + a = b$

$isolate(eq, t) = t = -\frac{a - b}{c}$

$isolate(eq, c \cdot t) = c \cdot t = -(a - b)$

$eq := a + b \cdot \tan(\theta^2) = c$

$isolate(eq, \theta) = \theta = \sqrt{\operatorname{atan}\left(\frac{c - a}{b}\right)}$

$isolate(eq, \tan(\theta^2)) = \tan(\theta^2) = -\frac{a - c}{b}$

isol returns only the rhs value

$eq := \cos(a) + b \cdot \exp(t^n) = c$

$isol(eq, t) = \sqrt[n]{\ln\left(\frac{c - \cos(a)}{b}\right)}$

$eq := \ln(a) + \frac{b}{\ln(u^n)} = c$

$isol(eq, u) = \exp\left(-\frac{b}{(-c + \ln(a)) \cdot n}\right)$

$eq := t = \sqrt[n]{\ln\left(\frac{c - \cosh(a)}{b}\right)}$

$isol(eq, a) = \operatorname{acosh}\left(-\left(-c + \exp(t^n) \cdot b\right)\right)$

For complicate equations can't find a close form

$isolate(x + x \cdot \sin(x), x) = x \cdot (1 + \sin(x)) = 0$

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