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TS
Tension Software

Micro Math 1.0

User Guide

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Welcome to Micro Math

Micro Math

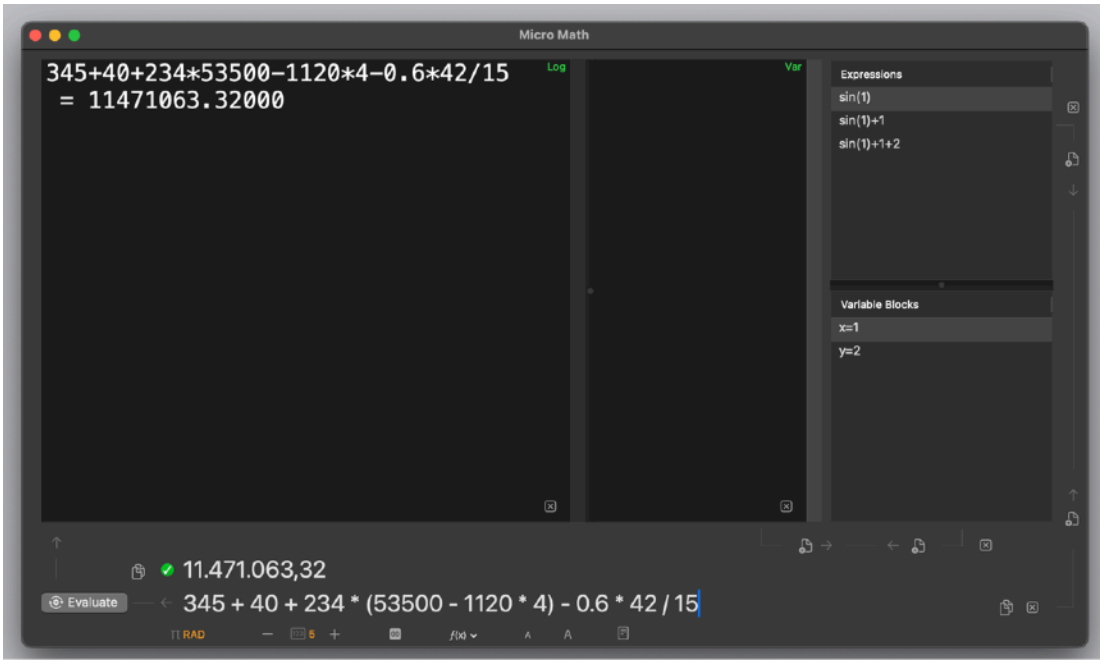
Micro Math is a macOS application designed to solve algebraic expressions with ease and precision.

The Micro Math window features two main input areas and two output areas:
A live result display for immediate feedback.
A calculation log, showing step-by-step evaluations.

At the bottom of the window, you'll find the main input field. You can type any algebraic expression — including deeply nested parentheses — and Micro Math will solve it instantly.

You can also use variables in your expressions.

If the variables are defined in the Variables Area, Micro Math will evaluate the expression using those values.



Getting Started with Micro Math

Quick Start

Launch Micro Math and type a math expression, such as:

345 + 40 + 234 * (53500 - 1120 * 4) - 0.6 * 42 / 15

Press **Return** and the result will be shown immediately

Using Parentheses

You can use nested parentheses, like:

1 + 2 * ((1 + 3) * ((5 - 1) / (3 - 1)))

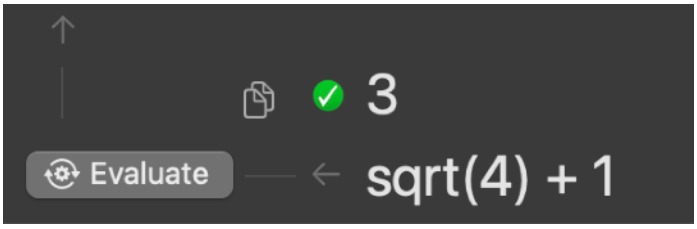
If parentheses are mismatched, Micro Math will display an error message

Using Functions

Micro Math supports functions. For example:

sqrt(4) + 1

Press **Return**, and Micro Math will show the result: `3`.



Using Variables

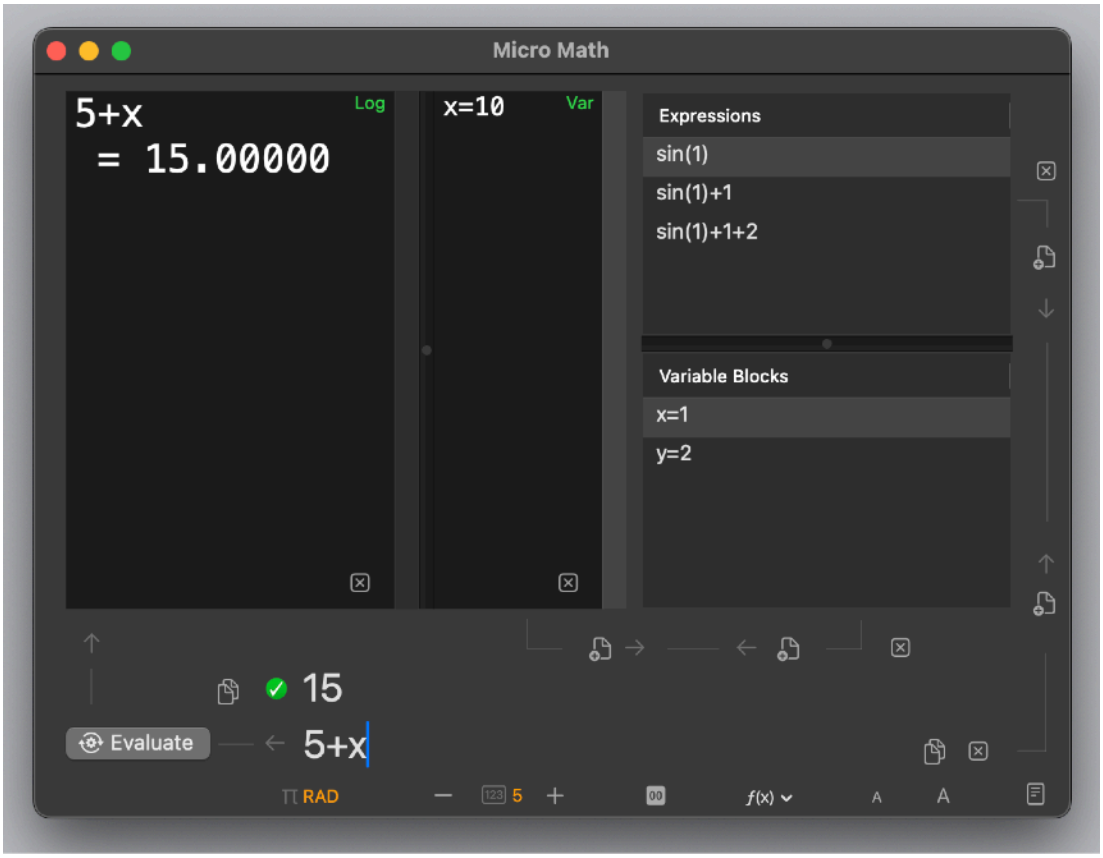
You can use variables in expressions. For example:
- In the Variables Area, type:

x = 10

- In the Input Area, type:

5 + x

The result will be: `15`.


Micro Math
5+x
= 15.00000
Log
x=10
Var
Expressions
sin(1)
sin(1)+1
sin(1)+1+2
Variable Blocks
x=1
y=2
15
Evaluate
5+x
RAD
5
f(x)

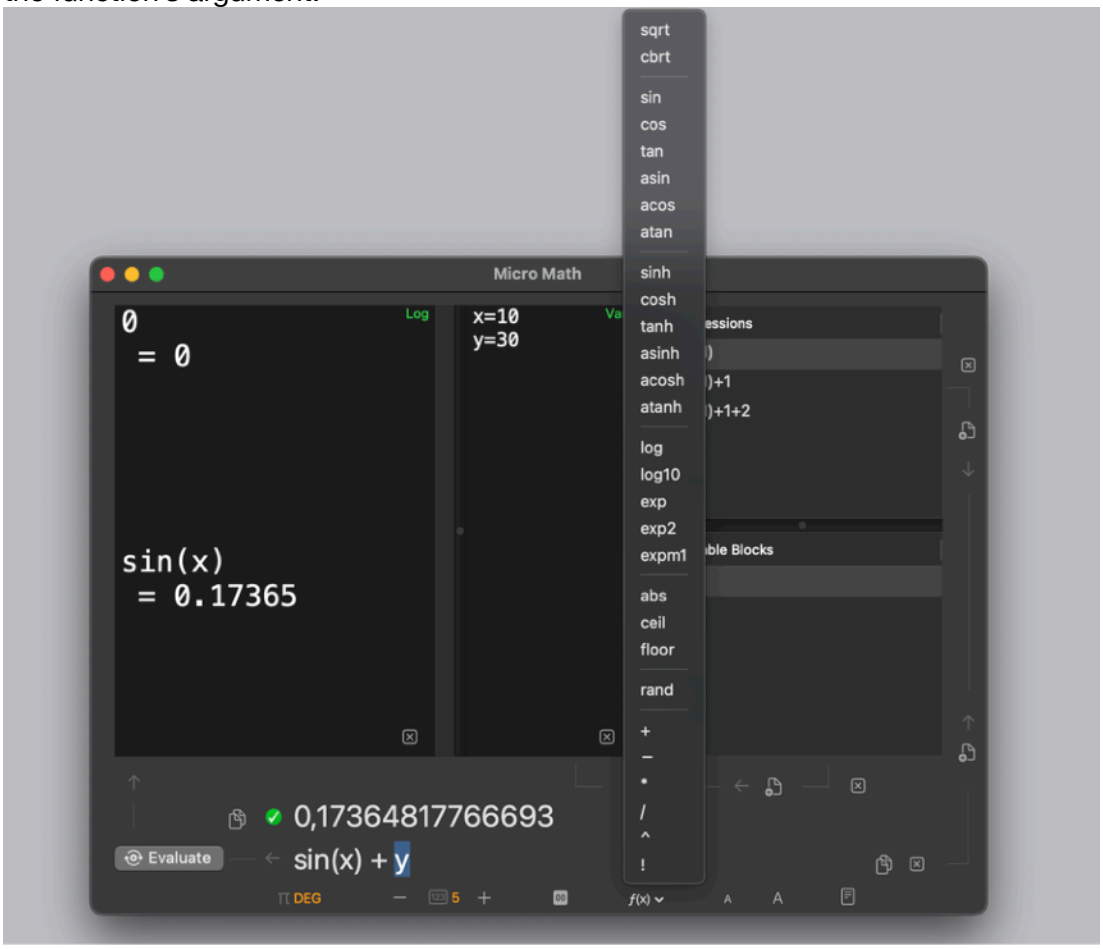
Working with Micro Math

Functions and Operators

Micro Math supports over 28 functions and operators.

You can access functions using the“Paste Function” submenu under the the input field.

If you select some text before inserting a function, Micro Math will wrap that text as the function’s argument.



Formatting

Micro Math respects your macOS locale settings for decimal separators.
- Both `.` and `,` can be used as decimal separators in input.
- Thousand have to be avoided inside the input text.

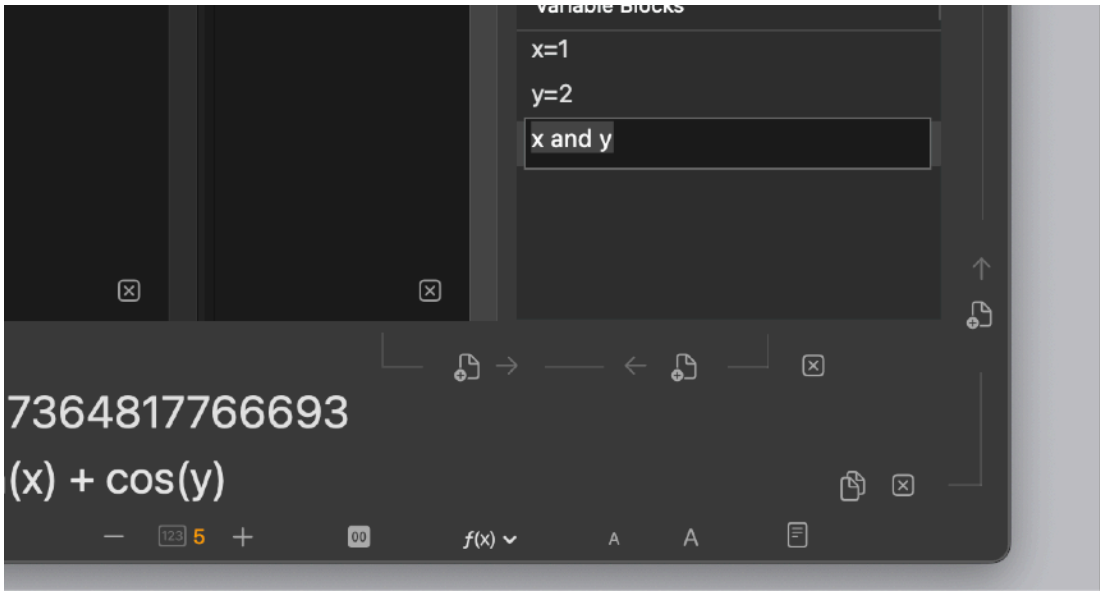
Variables

Variables can be freely defined in the Variables Area using the format:

```
x = 25
# this is a comment
// this is also a comment
; this is another comment
#another variable follows:
Y = 150
```

You can save sets of variables and recall them later from the Variable List.
To rename how a group of variables are represented inside the variable list, double click them in the variables list.

Only the currently active variables are used when evaluating expressions.



Expressions

Expressions can be saved and reused from the Expression List.
To rename an expression double click it

You can enter expressions with any combination of functions, variables, and nested parentheses.

To reuse an expression:
- Select it from the list.
- Press the Insert button.

Angle Units: Radians or Degrees

Micro Math supports both radians and degrees for trigonometric functions.

Use the toggle button in the main window to switch between the two modes. The selected mode will affect the behavior of functions like `sin`, `cos`, and `tan`.

Decimal Precision and Zero Fill

Decimal Precision: Determines how many digits are shown after the decimal point.

Zero Fill: Ensures numbers are displayed with trailing zeros to match the precision setting.

Example:
With precision set to 3, the number `7.4` will be displayed as `7.400`.

Error Handling

If there is an error in your input, Micro Math will report the issue and let you correct it.

Simply fix the expression and press **Return** again to evaluate.

Calculation Steps

Enable **Show Calculation Steps** to display evaluation step-by-step in the **CalcLog Area**.

Help and Support

User Guide

A full PDF User Guide is available in the **Help** menu.

Support

Use **Support Email...** from the Help menu to contact us directly.
We answer all support requests.

Website

For more information about Micro Math and other software, visit our website.

Function Appendix

Supported Functions and Operators:

sqrt(x) → Square root
cbrt(x) → Cubic root

sin(x), cos(x), tan(x)
asin(x), acos(x), atan(x)

sinh(x), cosh(x), tanh(x)
asinh(x), acosh(x), atanh(x)

log(x) → Natural logarithm
log10(x) → Base-10 logarithm

exp(x), exp2(x), expm1(x)

abs(x), ceil(x), floor(x)

rand(x) → Random number

+ - * / ^ ! → Standard math operators

All functions follow the format:

function(argument)

Note: Results using trigonometric and hyperbolic functions are affected by the Radians/Degrees setting.

Example usages:

sin(0.12)
(sin(0.12) + 0.03) * 2.43
sin(cos(sqrt(1.456)))

Other Software We Make

We offer a range of macOS applications on the App Store.

To explore them, use the **Show App Store List** option from the Help menu.

Thank you for using Micro Math!