



# CalcService

Thank you for using CalcService. This service calculates the result of a selected formula within all Cocoa applications (e.g. TextEdit, Mail, Stickies, [DEVONthink](#)) and Carbon applications supporting services.

The result is appended to the formula or replaces the formula. In addition there's the possibility to display the result in a panel or to copy the result to the clipboard without modifying the text. So there's no more need to start Calculator or open the Dashboard if you only want to calculate some values immediately within text windows or dialog fields.

## System requirements

OS X Yosemite or later.

## Installing and updating

Simply move CalcService into your *Applications* or *Applications/Utilities* folder, or into the folder *Services* (in the Finder visit the *Go* menu with the *Option* key pressed; choose *Library*; locate a folder named *Services*; if there is none, you can safely create it manually). Double-clicking CalcService let's your Mac learn about its new abilities; alternatively log out and in again.

In addition you may need to switch on the new *Services* menu options. Open *System Preferences*, then navigate to *Keyboard > Keyboard Shortcuts > Services > Text*. Turn on all options you want and optionally add a keyboard shortcut.

## Using the CalcService services

Select a formula (may contain white characters like space, tabulator, new line, carriage return), choose *Calculate & Append*, *Calculate & Replace*, *Calculate & Show* or *Calculate & Copy* in the Ser-

ices menu or or press the associated shortcuts if available. If the formula is not correct (or the result is undefined) CalcService just beeps or displays an error message in the panel.

To remove unnecessary entries from your *Services* menu, use the *Services Preferences* option from the *Services* menu.

## Operators/Numbers

- Floating point values: x.y or x,y
- Add, subtract, multiply, divide, modulo, exponential: +-\*/%^
- Assign: =  
Assigned variables are persistent and still available the next time you're going to use CalcService. To define multiple variables in one formula, separate the definitions with a semi-colon (;), as part of a formula use parenthesis around the definition (see examples below).
- Sign: + -
- Parenthesis: ()

## Functions (case-insensitive)

- exp (base e)
- exp10 (base 10)
- exp2 (base 2)
- ln (base e)
- log or log10 (base 10)
- log2 (base 2)
- sin (RAD)
- asin (-1 ... 1)
- cos (RAD)
- acos (-1 ... 1)
- tan (RAD)
- atan
- sqrt (square-root)
- abs (absolute)
- sign
- fact (factorial for statistics, combinations and variations etc.)
- ceil
- floor

- round
- sinh
- asinh
- cosh
- acosh
- tanh
- atanh

### Constants (case-insensitive)

- pi (3.1415926535897932385)
- e (2.7182818284590452354)
- c (299792458.0 m/s)
- g (66.732e-12 N\*m<sup>2</sup>/kg<sup>2</sup>)
- e0 (1.6021892e-19 As)
- u0 (1.2566e-6 V\*s/A\*m)
- q (1.602189e-19 C)
- me (9.109534e-31 kg)
- mp (1.672614e-27 kg)
- mn (1.67492e-27 kg)

If you want to change those values or define new constants, set one or more variables using the assignment-operator (see below).

## Examples

### Simple examples

- 5+4-3\*(pi+6,3)
- 3\*+5
- 7/--2
- 9/.125
- mp\*(c\*c)
- sqrt(exp(sin(pi/2))+7.5)
- cos(ln(e)\*pi)
- exp(1)
- abs(sin(sqrt(2)))\*sign(cos(pi\*pi))

- $9.3\%2.5$
- $2*3^{-(1+1)}$

### Single assignments

- $x=2$   $\Rightarrow 2$
- $y=x+3;$   $\Rightarrow 5$
- $(x=4)*y$   $\Rightarrow 20$

### Multiple assignments

- $x = 5; y = 7+3; z = x+y$   $\Rightarrow 15$
- $x = 1; y = 3;$   $\Rightarrow 3$
- $x = 5; y = 3; x*\exp(y)$   $\Rightarrow 100.428$
- $(x=y=4)*7$   $\Rightarrow 28$
- $(x=4;y=5;)*7+x-y$   $\Rightarrow 34$

## Known bugs and limitations

Do not use another CalcService command while a results panel is displayed.

## Version history

- |       |   |  |
|-------|---|--|
| 3.5   | NEW<br>Improved<br>Required                         | Numbers like 1.234,56 or 1,234.56 are now supported.<br>Optimized for OS X Yosemite through macOS High Sierra.<br>OS X Yosemite or later.  |
| 3.4.1 | NEW<br>Improved<br>Improved<br>Improved<br>Required | Can be double-clicked and installed like an application.<br>Updated services names optimized for OS X Lion or later.<br>Appearance of alert dialogs.<br>New icon.<br>Intel-based Mac, OS X 10.6.8 or later.            |
| 3.4   | NEW<br>NEW<br>Improved<br>Fixed                     | Copy button added to Calculate & Show alert to copy the result to the clipboard.<br>Compatibility to Mac OS X 10.6 'Snow Leopard'.<br>Optimized for Mac OS X 10.5 'Leopard' and 10.6.<br>Rare memory management issue. |

	Required	Mac OS X 10.5 or later.
3.3	Fixed	Typos in Read Me.
	Fixed	Statements like $x=0$ ; and $x$ ; afterwards returned a syntax error instead of 0.
	Fixed	Variable names were sometimes handled case sensitive.
	Fixed	Persistent variables were not always immediately written back to disk and therefore their usage was unreliable.
	NEW	Universal binary for Intel- and PowerPC-based Macs.
	Required	Mac OS X 10.3.9 or later.
3.2	Fixed	Bug of Mail.app on Mac OS X 10.4 bypassed.
	Fixed	Bug of evaluating exponential terms fixed (e.g. the result of $-3^2-4^2$ was -7 instead of -25).
	Fixed	Typos in Read Me.
3.1	NEW	<code>ceil()</code> , <code>floor()</code> , <code>round()</code> , <code>acosh()</code> , <code>asinh()</code> , <code>atanh()</code> , <code>cosh()</code> , <code>sinh()</code> and <code>tanh()</code> functions added.
	Removed	Shortcut of Calculate & Copy.
3.0	NEW	Calculate & Copy, sends the result to the clipboard.
	NEW	Exponential operator (^).
2.7.1	Skipped	
...		
1.0	Initial release.	

## Contacting us

Do you want to send us comments, bug reports or feature requests concerning CalcService? Do you have any questions about our products, our technology or our company? Do you work for the press or are you an investor? Please do not hesitate and feel free to [contact us](#) at any time.

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