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Overview

CALCPAD is a scientific calculator sporting a history pad and variables. It supports arithmetic operators, operator precedence, scientific functions, among other things.

General syntax:

[*var=*] *expression* [*;* *var= expression*]

When the *Var=* option is not specified, the variable "ans" is used.

CALCPAD is shareware. You are encouraged to try it for 30 days for free. If you find it useful, you should register. Registration would provide you the benefit of using it to the full potential, as well as provide the author incentive to write more utilities / to make speedy fixes and upgrades.

No matter you register or not, you are encouraged to give copies of CALCPAD to others, as long as it is not sold for profit. To make a copy for other people, make sure you copy these three files:

CALCPAD.EXE, CALCPAD.HLP, CALCPAD.TXT

The CALCPAD.INI file, which is only created during the registration process, contains your personal data, and should not be copied to others.

No warranty is provided, but the author is happy to take comments and suggestions.

Windows

Two windows are used by CALCPAD. They are the Command Window and the Variables Window. The command window includes the input field and the output field.

To switch between the three window edit areas, namely the input and output fields of the command window and the variable window, use the <TAB> key. Of course you can always use the mouse to move around as well.

The positions and sizes of the windows are recorded in the CALCPAD.INI file, if you are registered. This information is used when CALCPAD is started at a different time. If, however, more than one session of CALCPAD is run at the same time, the position of copies of CALCPAD other than the first use the Windows system default, so that they do not overlap.

Menus

Note that some of the menu items are only accessible to registered users.

File Menu	The save and open operations saves and restores the list of <u>variables</u> . The contents of the input and output windows are not saved or restored.
Edit Menu	The output window and the variable window are read-only. As such, the Paste menu choice does not function in these windows. However, you can still Copy from these windows.
Options Menu	The <u>Configure</u> operation allows configuration of several CALCPAD parameters, including case sensitivity. The <u>Choose Font</u> option allows the choice of font, of course.
Window Menu	The choices here function as in the Program Manager.
Help Menu	These function provide help using the Windows help utility.

The functions supported are:

abs	absolute value
sin	sine
cos	cosine
tan	tangent
asin	arc sine
acos	arc cosine
atan	arc tangent
sinh	hyperbolic sine
cosh	hyperbolic cosine
tanh	hyperbolic tangent
exp	exponent (base e)
ln	logarithm (base e)
log	logarithm (base 10)
sqrt	square root

Function names are by default case sensitive. You can change this behavior to case insensitive in the [Configure dialog](#).

The unit for the trigonometric functions are radians. The default variable "deg" can be used to convert between radians and degrees. For example, $\sin(30\text{deg})$ or $\text{asin}(0.5) / \text{deg}$.

Arithmetic Operators

5 operators are supported: +, -, *, /, ^.

When an operator is missing, multiplication is assumed.

Note that when a number is followed by letters that cannot be interpreted as a part of the number (that is, the exponent indicator "e" or "E"), the number is multiplied by the variable or function these letters may represent. However, when the situation is reversed (that is, when numbers follow letters), the numbers are regarded as part of the possible variable name.

Examples:

$2x+3y$	is interpreted as	$2 * x + 3 * y$
$2 \sin(2\text{Pi } x)$	is interpreted as	$2 * \sin(2 * \text{Pi} * x)$
$\cos(2\text{deg})*\sin 2\text{deg}$	is interpreted as	$\cos(2*\text{deg}) * \sin(2) * \text{deg}.$

See also: [Operator Precedence](#)

Operator Precedence

Highest:	()	parentheses
		function
	^	power
	*/	multiply or divide
Lowest	+ -	add or subtract

The order of calculation in the same level is from left to right.

Examples:

$\sin 2*\text{Pi}$	is interpreted as	$\sin(2) * \text{Pi}$.
3^1^2	is interpreted as	$(3^1)^2$.

See also: [Operators](#)

Variables Window

The variables defined so far are listed in this window. A variable has a user-defined name and a floating point value with up to 15 significant digits.

Variables are listed in the order they are defined. Variables cannot be used before they are defined. Variables have names that starts with a letter, optionally followed by several letters or numbers or underbars. All letters and numbers in the variable name are significant.

By default variable names are case sensitive. This behavior can be changed in the configure dialog.

Note the number of variables that can be defined are limited, due to memory constraint. The actual number used can be set in the configure dialog.

Output Window

This is the large area on the top portion of the Command window.

When Enter (or Return) is hit, the input field is copied to the output window. The results are entered into this window as well. In case of an input error, the error messages also appears in this window.

The output window contains outputs up to a certain line number. When more output needs to be written to this window, some portion of the oldest messages are deleted.

Input Window

This is the small one-line area on the bottom of the Command window. It is preceded by a # sign.

Commands are entered in this area. Common edit functions apply to this area as well.

Commands are only processed when the Enter (or Return) key is pressed. The whole line is processed no matter where the caret is when the Enter key is pressed.

Beside the Enter key, three keys are defined with special functions:

- Esc clears the input window

- Up arrow recalls the previous line in the output window

- Down arrow recalls the next line in the output window

Note the up and down arrows only function in registered versions.

Configure CALCPAD Dialog

This dialog is reached via the Options/Configure... menu choice. This choice is accessible to registered users only.

This dialog allows configuration of CALCPAD to your own liking. The configuration is limited, however, due to constraints on the total memory, among other things. The configuration parameters are recorded in the CALCPAD.INI file in the CALCPAD directory. They are used the next time you use CALCPAD, as well as in the subsequent operations in the same session.

The parameters you can configure are:

Max input chars	Maximum number of characters allowed in the <u>input window</u> . Before you reach this limit, more character input than displayable will scroll the input window to the left. After you reach this limit, system will beep when attempts to input more characters are made.
Max output lines	Maximum number of lines allowed in the <u>output window</u> . When more output text are generated, a chunk of the oldest ones will be deleted. See next paragraph for the chunk size.
Output delete lines	When the text in the output window exceeds the "Max output lines", as defined in the last paragraph, this many lines will be purged. Increasing this number will reduce the number of operations the purges needed, and thus increasing the system's apparent speed.
Max variable number	Maximum number of <u>variables</u> allowed. Once the limit is exceeded, additional calculations are still carried out, but the variables will not be stored in memory.
Case Sensitive	When checked, variables and <u>functions</u> are case sensitive. When unchecked, they are not. The default state is case sensitive.

Command Line

For registered users, a file name on the command would be used to automatically open the file on start-up. It is not necessary that the file name contains the default .CPD extension. The file content, however, have to bear the exact format required.

Choose Font Dialog

You can choose among all fixed-pitch fonts which are installed on your system. These include those fixed-pitch TrueType fonts if you are using Windows 3.1, or PostScript fonts if you are using Adobe Type Manager.

If you cannot find that a particular font on the font list that you believe it is a fixed-pitch font, it is likely that the font did not register with Windows system as a fixed-pitch font. You may choose to complain to the company which produced the font product.

For registered users, the chosen font will be stored in the initialization file when exiting from the program, and used during the next session.

The Initialization File

The initialization file is where a Windows program keeps the user-specific data. Some programs use the WIN.INI file in the Windows directory for this purpose, while others use a PROGRAM.INI file in the Windows directory to do the same.

To simplify system maintenance, the CALCPAD program uses an initialization file inside of its own directory. This way, the program as a group can be easily moved to a different directory when the system directory tree is adjusted. This also facilitates the process when under some unfortunate situation the program has to be removed.

The CALCPAD.INI file is created during the registration process. Once created, some of the parameters you choose will be recorded in this file. These parameters include those from the Configuration dialog, the window sizes and positions, and the font choice.

Registration

CALCPAD is shareware. Shareware is a concept that allows the trial use of a software product before paying for it. Registering a shareware that you like supports the development of more and better software for the benefit of the entire computer community.

You are requested to register your copy of CALCPAD if you use it for more than 30 days.

To register, fill in this form, and send it with your payment.

CALCPAD Registration

Fill out and send to:

Duanfeng He
1115 Arbor Dr.
Duluth, GA, 30136 USA

Name:

Address:

Reg. fee: **US\$5.00** **(single user)**

Shipping method for registration material (one of the following):

E-mail address in the internet format

Self-Addressed Stamped Envelop

Postage/processing fee: US\$0.50 domestic, US\$0.75 foreign.

Comments:

