

## **Contents for Calculator Help**

You can use Windows Calculator to perform simple calculations or solve scientific mathematical problems.

To learn how to use Help, press F1.

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### **Commands**

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## **Edit Menu Commands**

### **Copy**

Copies a value onto the Clipboard.

Because the Clipboard treats the value as text, you can copy values in any number system. Use this command when you want to copy a value and paste it into another application.

### **Paste**

Pastes a value from the Clipboard to the Calculator display area, or performs a Calculator function.

Calculator interprets each character on the Clipboard as if the character were typed on the keyboard. When you paste from the Clipboard, Calculator interprets some characters as key sequences or function keys.

## **View Menu Commands**

### **Scientific**

Switches to the scientific calculator.

Use the scientific calculator to make advanced calculations.

### **Standard**

Switches to the standard calculator.

Use the standard calculator to make simple calculations.

## Entering Calculations

You can use the mouse to click Calculator buttons or press the corresponding keys on your keyboard.

### To enter a calculation

- 1 Enter the first number in the calculation.
- 2 Choose the operator.
- 3 Enter the next number in the calculation.

If you make a mistake, choose the Back button (or press BACKSPACE) to delete incorrect digits. Or choose the CE button (or press DEL) to clear the entire number.

- 4 Enter any remaining numbers and operators.
- 5 Choose the equal sign button (=).

Or press ENTER or = (equal sign).

If you make a mistake, choose the C button (or press ESC) to clear the entire calculation.

## Using Calculator with the Clipboard

Calculator can supply calculated results to other applications and perform Calculator functions with values supplied by other applications.

### To copy the value from the Calculator display area onto the Clipboard

- ▶ From the Edit menu, choose Copy.

### To paste a character sequence from the Clipboard into Calculator

- 1 If you're using the scientific calculator, select a number system to paste into.
- 2 From the Edit menu, choose Paste.

Calculator interprets each character on the Clipboard as if the character were typed on the keyboard. When you paste from the Clipboard, Calculator interprets some characters as key sequences or function keys.

<b>Character</b>	<b>Function</b>
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:c	Clears any value stored in memory.
:e	Allows the entry of scientific-notation numbers in decimal mode. Also specifies the number "E" in hexadecimal mode.
:m	Stores the displayed value in memory.
:p	Adds the displayed value to any value in memory.
:q	Clears the current calculation.
:r	Displays the value stored in memory.
\	Same as the Dat button, which is normally assigned to the INS key. You must activate the Statistics Box before using this key.

## **Switching Calculators**

### **To switch calculators**

- ▶ From the View menu, choose Scientific or Standard.

## Using the Scientific Calculator Statistical Functions

### To perform a statistical calculation

- 1 Choose the Sta button. The Statistics Box appears.
- 2 Enter the first value in the calculation by using the mouse or keyboard.  
If you are using the keyboard, choose the RET button by pressing ALT+R, and then type the number.
- 3 Choose the Dat button to enter the value in the Statistics Box.
- 4 Enter any other numbers in the calculation, choosing the Dat button each time to place the value in the Statistics Box.
- 5 Choose the button for the statistical function you want to use--Ave (average), Sum (total), or s (standard deviation).
- 6 When you are finished using the Statistics box, choose Close from the Control menu to remove it.

Use the Statistics Box buttons in the following ways.

<b>Use</b>	<b>To</b>
RET	Switch to the main calculator and retain the Statistics Box entries.
LOAD	Change the number in the Calculator display area to the number selected in the Statistics Box.
CD	Delete the selected number from the Statistics Box.
CAD	Delete all numbers from the Statistics Box.

## Converting Values to Other Number Systems

When you start the scientific calculator, it is set to work in the decimal number system.

### To convert a value by using the scientific calculator

- 1 Enter the value.
- 2 Select the option for the number system you want to convert to--Hex (hexadecimal), Dec (decimal), Oct (octal), or Bin (binary).
- 3 Select the unit of measurement in which to display the result. When converting to hexadecimal, octal, or binary numbers, you can select the Dword, Word, or Byte option.

If you convert a decimal number containing decimal places to another number system, Calculator shortens the number to its integer. Numbers converted from the hexadecimal, octal, or binary number system to the decimal system also appear as integers.

Number system	Range
Hexadecimal	$-2^{31}-1$ to 2 <sup>31</sup> -1
Decimal	-9.999999999999999e-307 to 9.999999999999999e+307
Octal	$-2^{31}-1$ to 2 <sup>31</sup> -1
Binary	$-2^{31}-1$ to 2 <sup>31</sup> -1



## Using Standard Calculator Functions

To use the standard calculator functions, click the following buttons or press the keyboard equivalent.

<b>Button</b>	<b>Key</b>	<b>Function</b>
+	+	Adds.
-	-	Subtracts.
*	*	Multiplies.
/	/	Divides.
+/-	F9	Changes the sign of the displayed number.
.	. or ,	Inserts a decimal point in the displayed number. The period is the standard setting for a decimal separator. Use Control Panel to change the decimal separator.
sqrt	@	Calculates the square root of the displayed value.
%	%	Calculates percentages.
=	= or ENTER	Performs any operation on the previous two numbers. Choose again to repeat the last operation.
1/x	r	Calculates the reciprocal of the displayed number.
Back	BACKSPACE	Deletes the rightmost digit of the displayed number.
C	ESC	Clears the current calculation.
CE	DEL	Clears the displayed number.
MC	CTRL+L	Clears any value stored in memory.
MR	CTRL+R	Recalls the value stored in memory. The value remains in memory.
MS	CTRL+M	Stores the displayed value in memory.
M+	CTRL+P	Adds the displayed value to any value already in memory.

## Using Memory Functions

To use the Calculator memory functions, click the following buttons or press the keyboard equivalent.

<b>Button</b>	<b>Key</b>	<b>Function</b>
MC	CTRL+L	Clears any value stored in memory.
MR	CTRL+R	Recalls the value stored in memory.
MS	CTRL+M	Stores the displayed value in memory.
M+	CTRL+P	Adds the displayed value to any value already in memory.

When you store a value in memory, the letter M appears in the box below the display area. If you store a zero in memory or if you add a value to memory that results in a value of zero, the letter M disappears. If you store another value in memory, it replaces the current value in memory.

## Using Number-Base Functions

To use the advanced number-base functions in the scientific calculator, click the following buttons or press the keyboard equivalent.

<b>Button</b>	<b>Key</b>	<b>Function</b>
Bin	F8	Converts to the binary number system.
Byte	F4	Displays the lower 8 bits of the current number.
Dec	F6	Converts to the decimal number system.
Dword	F2	Displays the full 32-bit representation of the displayed number.
Hex	F5	Converts to the hexadecimal number system.
Oct	F7	Converts to the octal number system.
Word	F3	Displays the lower 16 bits of the current number.

## Using Operators

To use the advanced operator functions in the scientific calculator, click the following buttons or press the keyboard equivalent.

<b>Button</b>	<b>Key</b>	<b>Function</b>
(	(	Starts a new level of parentheses. The current number of levels appears below the display. The maximum number of levels is 25.
)	)	Closes the current level of parentheses.
And	&	Calculates bitwise AND.
Int	;	Displays the integer portion of a decimal value. Inv+Int displays the fractional portion of a decimal value.
Lsh	<	Shifts left. Inv+Lsh shifts right. After selecting this button, you must specify (in binary) how many positions to the left or to the right you want to shift the number in the display area. Then press = (equal sign).
Mod	%	Displays the modulus, or remainder, of x/y.
Not	~	Calculates bitwise inverse.
Or		Calculates bitwise OR.
Xor	^	Calculates bitwise exclusive OR.

## Using Advanced Statistical Functions

To use the advanced statistical functions in the scientific calculator, click the following buttons or press the keyboard equivalent.

<b>Button</b>	<b>Key</b>	<b>Function</b>
Ave	CTRL+A	Calculates the mean of the values displayed in the Statistics Box. Inv+Ave calculates the mean of the squares.
Dat	INS	Enters the displayed number in the Statistics Box.
s	CTRL+D	Calculates standard deviation with the population parameter as n-1. Inv+s calculates standard deviation with the population parameter as n.
Sta	CTRL+S	Opens the Statistics Box and activates the Ave, Sum, s, and Dat buttons.
Sum	CTRL+T	Calculates the sum of values in the Statistics Box. Inv+Sum calculates the sum of the squares.

## Using Other Advanced Functions

To use the other advanced functions in the scientific calculator, click the following buttons or press the keyboard equivalent.

Button	Key	Function
cos	o	Calculates the cosine of the displayed number. Inv+cos calculates the arc cosine. Hyp+cos calculates the hyperbolic cosine. Inv+Hyp+cos calculates the arc hyperbolic cosine.
Deg	F2	Sets trigonometric input for degrees. Use this function in decimal mode.
dms	m	Converts the displayed number to degree-minute-second format (assuming that the displayed number is in degrees). Inv+dms converts the displayed number to degrees (assuming that the displayed number is in degree-minute-second format).
Exp	x	Allows entry of scientific-notation numbers. The exponent has an upper limit of +307. You can continue to enter numbers as long as you use only keys 0-9. Exp can only be used with the decimal number system.
F-E	v	Turns scientific notation on and off. Numbers larger than $10^{15}$ are always displayed exponentially. F-E can only be used with the decimal number system.
Grad	F4	Sets trigonometric input for gradients in decimal mode.
Hyp	h	Sets the hyperbolic function for sin, cos, and tan. The different functions automatically turn off the hyperbolic function after a calculation is completed.
Inv	i	Sets the inverse function for sin, cos, tan, PI, $x^y$ , $x^2$ , $x^3$ , ln, log, Ave, Sum, and s. The different functions automatically turn off the inverse function after a calculation is completed.
In	n	Calculates natural (base e) logarithm. Inv+In calculates e raised to the xth power, where x is the current number.
log	l	Calculates common (base 10) logarithm. Inv+log calculates 10 raised to the xth power.
n!	!	Calculates factorial of the displayed number.
PI	p	Displays the value of pi (3.1415...). Inv+PI displays $2 * \pi$ (6.28...).
Rad	F3	Sets trigonometric input for radians when in decimal mode.
sin	s	Calculates the sine of the displayed number. Inv+sin calculates the arc sine. Hyp+sin calculates the hyperbolic sine. Inv+Hyp+sin calculates the arc hyperbolic sine.
tan	t	Calculates the tangent of the displayed number. Inv+tan calculates the arc tangent. Hyp+tan calculates the hyperbolic tangent. Inv+Hyp+tan calculates the arc hyperbolic tangent.
$x^y$	y	Computes x raised to the yth power. Inv+ $x^y$ calculates the yth root of x.
$x^2$	@	Squares the displayed number. Inv+ $x^2$ calculates the square root.
$x^3$	#	Cubes the displayed number. Inv+ $x^3$ calculates the cube root.

