



# *powerOne*<sup>™</sup> **Personal**

**Version 2.0**

[www.infinitysw.com](http://www.infinitysw.com)  
[support@infinitysw.com](mailto:support@infinitysw.com)

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# Getting Started

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This section helps you get started using your powerOne™ Personal calculator.

## The Displays

There are two main displays: the calculator and the templates. Additionally, several types of input screens are used to enter numeric, date or time values into the templates. The templates perform business, conversion and statistics computations, working with the input screen to enter variables and perform calculations.

## Number Ranges

Entry of numbers with up to 12 decimal places and 14 digits is allowed. Numbers larger than this will display in scientific notation (e.g., 1.234e13). Numbers may be entered and displayed in normal, scientific notation or engineering notation.

## Long Calculations

Depending on the speed of your device and the complexity of the calculation, some calculations may take a few seconds to complete. Generally in such cases, a dialog box containing “Calculating...” with a 'Cancel' button will be shown. You can stop the calculation by tapping and holding the cancel button.

## PalmOS® Devices

This manual references certain objects of the PalmOS device:



### *powerOne Button*

The **powerOne button**, in the top left corner of the display, offers access to logging functions, online help, product information, and calculator preferences.

If the manual refers to the menu bar, you need to tap the menu button to make the menu bar visible.

In addition, this manual will refer to scroll arrows, scroll buttons, and scroll bars. Scroll arrows appear in the lower, right-hand corner of the screen or in the pop-up list. Scroll bars appear next to the data to be scrolled. In most cases, however, scrolling can be achieved using the scroll buttons shown above.

### *Setting the Default Calculator*

Some PalmOS devices have a calculator button in the Graffiti area as shown above. To set a powerOne product as the default calculator

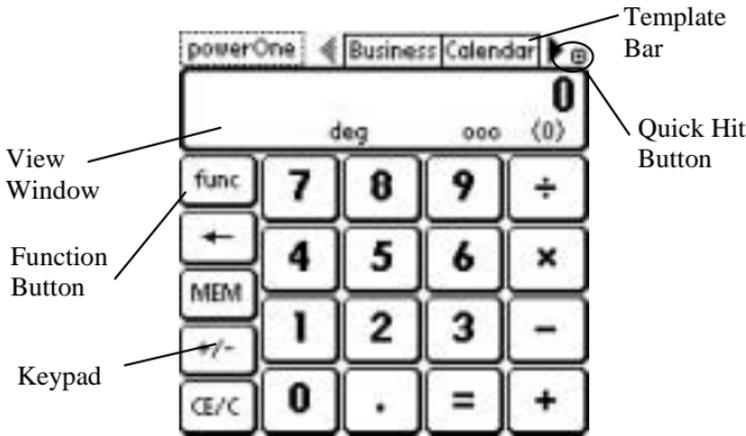
(which means that it will appear when you hit the calculator button above), enter the application and choose the powerOne button in the upper, left-hand corner of the main calculator display. From the list, select Preferences and check the “Use Calc Button” checkbox.

# The powerOne™ Display

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This section discusses the calculator display. The display is broken into four sections: the template bar across the top, the view window, the keypad and the menu.

Each section is outlined below.



## Template Bar & Template Quick Hit Button

The template bar offers quick access to templates within the application. See *Using the Templates* for more information on navigation. Tapping the arrows left or right scrolls more templates into view while tapping the template quick-hit button displays all available template categories at one time.

## View Window

The view window shows both entered and calculated values. In addition, it shows certain status indicators:

- **Clear:** displays 'clear' when the current value has been cleared during an arithmetic operation. See the section on CE/C for more information.
- **Trig. Mode:** displays current trigonometry mode - 'deg' for degrees, 'rad' for radians.
- **Display Mode:** displays 'eng' when in engineering display mode, 'sci' when in scientific display mode.
- **Input Mode:** displays the current input mode - 'ooo' for order of operations, and 'chain' for chain mode. See the section on Calculator Settings for more information.
- **Parentheses:** displays the number of open levels of parentheses. See the section on parentheses for more information.

## Function Button

Beyond the basic arithmetic functions available on the keypad, the most commonly used math, trigonometric and statistics functions are supported via lists accessible through the function button. This button is labeled “func”.

## Keypad

The keypad is a series of buttons that allow for rapid entry of numbers and commonly used mathematical functions. This keypad has basic mathematics and number keys, functions for memory (MEM), and functions for number manipulation, such as sign change and backspace. See their respective sections for more information.

## Menus

Choosing the menu button to the lower, left-hand corner of the Graffiti input area accesses the menus. Standard PalmOS edit choices, Graffiti help, Preferences, and application information can be accessed from here.

The Edit menu:

<b>Function</b>	<b>Shortcut</b>	<b>Comments</b>
Copy	/C	Copies the selected text to the clipboard.
Paste	/P	Pastes the selected text from the clipboard to the entry field.
Keystroke Help	/O	Graffiti keystrokes for the calculator
Graffiti Help	/G	Help writing Graffiti characters

The Options menu:

<b>Function</b>	<b>Shortcut</b>	<b>Comments</b>
Preferences	/R	Displays the calculator preferences.
About...		Displays company information.

Copy, paste, preferences and the about screen can all be reached from the powerOne button as well.

# Performing Arithmetic

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Functions are available either on the screen or from the list displayed when the “func” button is selected. Select that button to display the list. Other buttons function as standard calculator buttons.

## Input Mode

This calculator can be used in "order of operations" mode or chain calculation mode.

The input mode affects how calculations containing two variable functions are evaluated:

### *Order of Operations Input Mode*

This is the input mode used by many scientific calculators. In this input mode the calculator obeys what is called the "order of operations" whereby each two variable operation is assigned a priority as follows (single variable operations are performed immediately):

Order #	Function
1	negate (-x)
2	powers and roots
3	multiplication, division and percentages
4	addition and subtraction

To perform a computation, enter alternating values and functions, ending by tapping equals [=] to calculate. To calculate  $27 + 3 \times 8.5$ :

Key	Display	Comments
C/CE	0	Tap twice to clear the display
27	27	
+	27.00	

## Performing Arithmetic

3	3	
×	3	
8.5	8.5	
=	52.5	i.e. $27 + (3 \times 8.5)$

The number of decimal places displayed depends on the decimal setting. See the section on Calculator Settings for more information.

### *Chain Input Mode*

This is the input mode used by many business calculators. In this input mode math is performed by alternating chains of values and operations. Each operation is evaluated as it is entered.

To perform a computation, enter alternating values and functions, ending with an equals to calculate. To calculate  $27 + 3 \times 8.5$ :

Key	Display	Comments
C/CE	0	Tap twice to clear the display
27	27	
+	27.00	
3	3	
×	30.00	
8.5	8.5	
=	255.00	i.e. $27 + 3 = 30$ , $30 \times 8.5 = 225$

### **Entering Numbers (0-9; ./,; +/-; →; CE/C)**

To enter a number, tap the corresponding keypad button (0-9, decimal point, or sign).

To enter -356.96, for instance, do the following:

Key	Display	Comments
C/CE	0	Tap twice to clear the display
3	3	

5	35	
6	356	
. or ,	356.	Depends on the number format
9	356.9	
6	356.96	
+/-	-356.96	

The decimal point can either be displayed as a period or as a comma. This depends on the number format mode used. See your device owner's manual for more details.

The following are number entry functions:

<b>Operation</b>	<b>Example</b>	<b>Comments</b>
Number	0-9	Number pad items
Decimal point	. or ,	Depends on the number format
Sign	+/-	
Exponent	e or EE	Exponential notation

To enter a number in Exponential Notation, enter the mantissa then enter the exponent.

For example, to enter  $-1.29e-54$  do the following:

<b>Key</b>	<b>Display</b>	<b>Comments</b>
C/CE	0	Tap twice to clear the display
1.29	1.29	
EE	1.29e	Tap "func", then "num", and then EE
+/-	1.29e-	
54	1.29e-54	
+/-	-1.29e-54	

The Backspace ( $\leftarrow$ ) button allows for editing of numbers as they are entered. Tapping this button removes the last digit entered (i.e., 54.32 becomes 54.3).

Tapping the Clear Entry/Clear (CE/C) button once clears only the currently entered number. Tapping it a second time clears the entire computation.

## Mathematics

Math functions are either one or two variable. Two-variable math, such as add, subtract, multiply and divide, take two variables to compute. One-variable functions, such as square root and reciprocal ( $1/x$ ), need only one variable to calculate. Many math functions are visible on the screen. Others can be accessed via the “func” function button.

### *One Variable Functions*

Multiple one-variable math functions are supported, including square root, x-squared, and reciprocal. These functions use only the value in the main view window. For example, to calculate the square root of 8:

Key	Display	Comments
C/CE		Tap twice to clear the display
8	8	
$\sqrt{x}$	2.83	

The following are examples of one-variable math functions:

Operation	Example	Keystroke	Answer
Last		[last]	
		Recalls the last calculated answer	
Logarithm	$\log(8)$	8 [log]	0.90
Natural anti-log or e <sup>2</sup> Exponential		2 [e <sup>x</sup> ]	7.39

Natural Log	$\ln(4)$	4 [ln]	1.39
Percent	15%	15 [%x]	0.15
Power of 10	$10^4$	4 [ $10^x$ ]	10,000
Reciprocal	1/5	5 [1/x]	0.20
Show		[show]	
		Shows all available decimal places for the currently displayed number	
Square	$8^2$	8 [ $x^2$ ]	64.00
Square root	$\sqrt{8}$	8 [ $\sqrt{x}$ ]	2.83
Trig Functions	$\sin(30)$	30 [sin]	0.50

### *Two-Variable Functions*

Multiple two-variable math functions are supported, including basic math, power and percentage change. The following are examples of two-variable functions:

<b>Operation</b>	<b>Example</b>	<b>Keystroke</b>	<b>Answer</b>
Addition	$8 + 3$	8 [+] 3 [=]	11.00
Division	$8 \div 3$	8 [÷] 3 [=]	2.67
Multiplication	$8 \times 3$	8 [×] 3 [=]	24.00
Percent	15% of 350	350 [×] 15 [%x] [=]	52.50
Percent add-on	22.95 + 6% sales tax	22.95 [+] 6 [%x] [=]	24.33
Percent discount	39.99 less 10%	39.99 [-] 10 [%x] [=]	35.99
Percent ratio	9 is what percent of 25	9 [÷] 25 [%x] [=]	36.00
Power	$3^4$	3 [ $y^x$ ] 4 [=]	81.00
Root	$\sqrt[3]{8}$	8 [ $y\sqrt{x}$ ] 3 [=]	2
Subtraction	$8 - 3$	8 [-] 3 [=]	5.00

## **Memory**

There is a single memory location, plus the system clipboard. To access the memory location, use the 'MEM' button. To access the system clipboard, use Copy and Paste from the edit menu or by selecting the powerOne button.

### *Memory Locations*

To store to a memory location, enter the number, select “MEM”, and finally “Store”. To recall the value, select “Recall”. To clear the memory location, choose “Clear”.

### *System Clipboard*

The system clipboard allows numbers to be moved from one application to another. To store to the system clipboard, enter the number then select copy from the edit menu or powerOne button. Recall information from the system clipboard by selecting paste from the same location.

# Skins/Personalized Displays

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Skins offer a personal look to the main and input calculators. Some skins offer a different button layout, offering the advanced mathematics functions in drop down lists or giving access to programmable buttons, which can be changed in the preferences screen. Still other skins offer different color schemes.

Free skins are available at Infinity Softworks' web site. To learn more, select the "powerOne" button in the application, then choose "Skins".

## Installing Skins

After downloading them from Infinity Softworks web site and synchronizing them to your device's main memory (not an expansion card), run the application. The skins will be imported automatically.

## Changing Skins

To change skins, select "Skins" from the "powerOne" button. Choose the skin by selecting it with the stylus and then select "OK". The calculator display will change automatically. "<Default>" is the original display that came with your product.

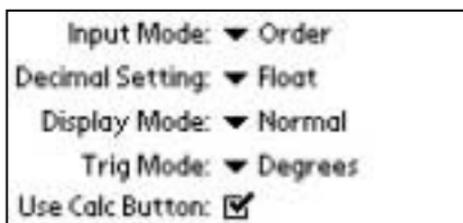
## Deleting Skins

To delete a skin, select "Skins" from the "powerOne" button. Choose the skin by selecting it with the stylus and then select "Delete".

## Calculator Settings

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The Preferences screen sets preferences for the main and input calculators. The templates have their own preferences, detailed in the section on Using the Templates.



To access the calculator settings, go to the main calculator display and choose “Preferences” from the powerOne button or “Options” menu.

### Input Mode

Set the desired input mode by choosing a setting from the popup list. There are three possible input modes:

- **Order of Op.:** selects order of operations mode.
- **Chain:** selects chain mode.

See the section on Input Mode under Performing Arithmetic for details on each mode.

### Decimal Setting

Set the displayed decimal places by choosing a setting from the popup list. There are thirteen possible decimal place settings:

- **Float:** shows all available decimal places.
- **0-11:** shows that many decimal places.

In addition, the show function displays all available decimal places until the next entry is made. This can be used to quickly see all available decimal places when the decimal setting is not set to float.

Remember that the decimal setting is limited to the number of total digits. A 15-digit number, for example, will not show decimal places.

In engineering display mode the decimal setting controls the number of significant digits displayed rather than the number of decimal

places: the number of significant digits displayed is 1+ the decimal setting.

## Display Mode

There are three display modes: normal, scientific and engineering. In normal mode, numbers appear as they are entered. In scientific mode, numbers are always displayed in scientific notation and likewise, in engineering mode numbers are always displayed in engineering format.

## Trig Mode

When using trigonometric functions, either degrees or radians can be used. Choose which mode by selecting one of the two. In radians mode, 'rad' will appear in the lower part of the view window, otherwise 'deg' will appear.

## Use Calc Button

By checking this box, the application will become the default calculator. Once checked, selecting the calculator button in the top, right-hand corner of the Graffiti input area will display this calculator.

## Default Settings

To return the preferences to their default settings, choose the Default button next to Done.

## Programmable Buttons

Some add-on skins offer programmable buttons, which can be set to any function or template in the calculator. See the section on Skins/Personalized Displays for more details.

## Using the Templates

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Templates are used to perform business and calendar computations. This section details their general use. See the section on each template for details on that specific computation.

### Accessing the Templates

To access a template, choose a category from the template bar in the top, right-hand corner of the display. This list scrolls right and left with the scroll arrows. For faster access, choose the template quick hit button to the right of the template bar. This will list all template categories within the application. The following templates are supplied with the application, listed by category:

#### *Business*

- Discount
- Markup
- Percent Change
- Profit Margin
- Sales Tax
- Tip

#### *Calendar*

- Date
- Time

### Add-on Calculation Templates

Additional template sets can be added from Infinity Softworks' web site. These template sets are free upon registration. For more information, see "Other Calculations" by selecting the powerOne button in the application.

Once downloaded, synchronize the add-on template set to the device's main memory (not to an expansion card) and run the application. The template set will be imported automatically.

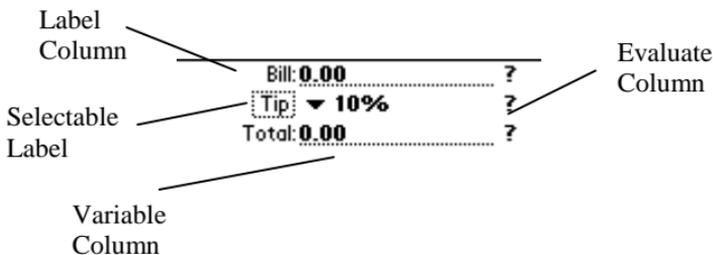
To delete the add-on templates, enter any template in the set, select the menu button, and choose "Delete Template Set" from the Template menu.

## Template Layout

All templates are similar in nature:

- Each template has a **Clear** button which sets the data back to its default values.
- Each template has notes explaining how it is used. The notes are accessed through the "i" icon at the upper right hand corner of the template.
- To exit the template, select "Done".
- The templates contain a menu allowing values to be exported and the settings to be changed. See the section on Template & Variable Settings for more details.

Templates contain data in a columnar form as follows:



The first, or label, column contains the names of the variables. The second column contains the current value of the variable. To enter a value, tap on the value column and enter it in the input screen. The

third, or evaluate, column contains "?" buttons next to variables that can be calculated. To compute a value, tap the "?" button next to the variable to be computed.

Some templates offer multiple methods of looking at the same variable. In such cases, a box appears around the variable's label. For example, in the Tip template (shown above), the tip can either be an amount ("Tip\$"), a percentage selected from a pop-up list ("Tip"), or a manually entered percentage ("Tip%").

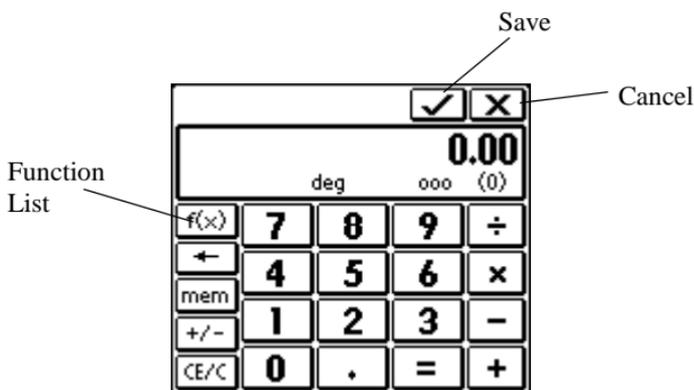
## Entering Data

In the templates, values are entered using the number input screen, date selector, or time selector, depending on the type of data requested. The date and time selectors are standard to the operating system on your device, used in applications such as the calendar and to do list. The number input screen is native to the powerOne line of calculators.

### *Number Input Screen*

The number input screen is used to enter numerical values in the templates.

When a value is selected, that value appears in the input screen:



The keyed function buttons work similar to those in the main calculator. All the functions available in the main calculator are

available to the input calculator through the “func” function list button. Entries made in the main calculator are separate from the input screen except for the memory, which provides a simple way of sharing values between the calculator and templates.

To store the value in the input screen back to the template tap the “✓” or save button. To return to the template without saving, tap the “X” or cancel button.

### *Date Selector*

The date selector is used to enter dates. Scroll the year with the left-right scroll arrows or change it by clicking and entering the value with Graffiti input, and select a month and day to return to the template.

### *Time Selector*

The time selector is used to enter times. Change the hours and minutes by selecting the value and using the scroll arrows and then selecting AM or PM.

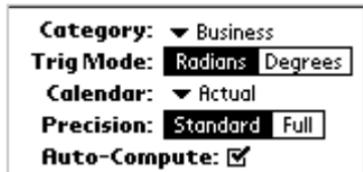
## **Template & Variable Settings**

Templates contain two groups of settings, one for the template itself and one for each variable within the template. Each template maintains its own settings, as does each variable of a template. The settings are reached via the Options menu from within the template.

### *Template Preferences*

Each of these settings refer to the currently selected template.

- **Trig Mode:** allows trigonometric operations to be done in either degree or radian mode, if it is not defined by the template.
- **Calendar:** allows date arithmetic to be performed using an actual, 30/360, actual/360 or actual/365 calendar. Some templates allow for this change directly in the



template itself.

The "actual" day count method counts the actual number of days in a month (even allowing for leap years) and the total number of days in a year.

The 30/360 method treats all months as though they have 30 days and years as though they have 360 days.

The actual/360 method counts the actual number of days in a month, but treats years as though they have 360 days.

The actual/365 method counts the actual number of days in a month, but treats years as though they have 365 days.

These different day count methods are sometimes referred to as "basis" or "day count basis" and are frequently used in financial calculations.

- **Precision:** some calculations require an iterative search for the answer and take more than 1 second to calculate. When this occurs, a Computing dialog will appear. Precision affects the time of the calculation. Setting it to Full will calculate until full precision is reached. Setting it to Standard will only calculate to the displayed decimal places. Full precision takes longer to calculate but is more accurate than standard precision.
- **Auto-Compute:** when checked, the application will automatically determine when the “?” should be visible. When a value is entered into the template, a “?” will appear next to any other variable which may be affected by the change. When a value is recomputed, the question marks will disappear. While this is checked, any other values that can automatically be recalculated will be after each change.  
For example, if a template contains just two variables, changing the value of one variable will automatically cause the other variable to be recalculated. If unchecked, the compute “?” will remain visible at all times, and values will only be recalculated when you tap their “?” button.

## *Variable Preferences*

Each of these preferences refer to the variables within the currently selected template. To set the preferences for a variable, first choose it

from the Variable pop-up list. Selecting “Set All” will set all the variables to the current variable’s preferences.

- **Variable:** the variable to set.
- **Dec Setting:** sets the displayed decimal places - float mode displays all available decimal places, 0-11 sets the decimal places to that number of places.
- **Disp. Mode:** numbers can be displayed in normal mode, scientific notation or engineering notation. See Calculator Settings section for details.
- **Justified:** show the value left or right justified on the display.
- **Visible:** shows the variable if checked. A variable which is hidden will not be recalculated, even if Auto-Compute is checked.
- **Global:** if checked, allows the value of the variable to be shared with other templates. The equation variable is listed next to the 'Global' check box. In some cases this will be different than the displayed variable name (shown at the top of the page next to the 'Variable' label). For this variable to be shared with another template, the other template must contain the equation variable exactly as shown and its Global check box must also be checked.
- **Range:** available if the variable requires an iterative search to calculate its value. The range is the maximum and minimum starting points for calculation. The closer these are, the faster and more accurately a value can be derived.

<b>Variable:</b>	▼ Interest%
<b>Dec. Setting:</b>	▼ Float
<b>Disp. Mode:</b>	Normal Sci Eng
<b>Justified:</b>	Left Right
<b>Visible:</b>	<input checked="" type="checkbox"/>
<b>Global:</b>	<input type="checkbox"/> Interest
<b>Range</b>	
<b>Min:</b>	-1E300
<b>Max:</b>	1E300

# Business Computations

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A series of business computations exist. Included are templates to perform percent change, profit margin, discount, markup, sales tax and tip computations.

## Discount

This template performs discount computations:

- **Price:** current price.
- **Sales Price:** sales price.
- **Discount%:** percentage discount.

For example, a 30% discount would be entered as “30”.

Price: <b>55.00</b>
Sale Price: <b>46.75</b>
Discount%: <b>15.00</b>

## Markup

This template performs markup computations:

- **Method:** computation based on price or cost. Profit margin computations are based on price; percent change computations are based on cost.
- **Cost:** the cost to manufacture or purchase.
- **Price:** the selling or resale price.
- **Markup%:** the markup expressed as a percentage. For example, an 8.125% change would be entered as “8.125”. A positive value represents an increase while a negative one represents a decrease.

Method: ▼ <b>% of Cost</b>
Cost: <b>125.00</b>
Price: <b>168.75</b>
Markup%: <b>35.00</b>

## Percent Change

This template performs percentage change computations with one or more compounding periods:

- **Old:** the old value.
- **New:** the new value.
- **Change%:** the percentage changed per period. For example, an 8.125% change would be entered as “8.125”. A positive value represents an increase while a negative one represents a decrease.
- **Periods:** the number of periods.

Old: <b>15,000.00</b>
New: <b>25,000.00</b>
Change%: <b>10.75663432483</b>
Periods: <b>5</b>

Percent change set to one period and markup as a percentage of cost are identical computations.

## Profit Margin

This template performs profit margin computations:

- **Cost:** the cost to manufacture or purchase.
- **Price:** the selling or resale price.
- **Margin%:** the gross profit margin expressed as a percentage. For example, an 8.125% change would be entered as “8.125”. A positive value represents an increase while a negative one represents a decrease.

Cost: <b>47,000.00</b>
Price: <b>123,000.00</b>
Margin%: <b>61.78861788618</b>

Profit margin and markup as a percentage of price are identical.

## Sales Tax

This template performs sales tax computations:

- **Before Tax:** before tax amount.
- **Tax Rate%:** tax rate expressed as a percentage. For example, a 6% tax rate would be entered as “6”.

- **After Tax:** after tax amount.

## Tip

The tip template computes tip, total bills, and performs bill-splitting functions.

- **Bill:** the bill amount before tip.
- **Tip/Tip%/Tip\$:** "Tip" allows a percentage to be chosen from the pop-up list. "Tip%" allows a tip percentage to be manually entered. "Tip\$" allows a tip amount to be shown or entered.

Bill: 0.00	?
Tip: ▼ 15%	?
Total: 0.00	?
#People: 1	
Ttl/Person: 0.00	?

- **Total:** the total amount including the tip.
- **#People:** the number of people paying for the meal.
- **Ttl/Person:** the total per person, split evenly among the people paying for the meal.

The tip computation calculates from the top down. In other words, to calculate the tip amount, it will first attempt to use Bill, then Total, and finally Ttl/Person to calculate. It knows to use a value when the variable is not zero. If Bill is 0, for example, it will use Total.

## Examples

### *Percent Change*

To perform this computation, choose Percent Change from the template menu on the main screen. Over 4 years, sales increased from \$45 million to \$115 million. The industry average is 20% increase per year. How does your company compare?

Variable	Entry	Comments
Clear...		Sets the display to its default values

Old	45,000,000
New	115,000,000
Periods	4

Compute the percent change by selecting “?” on the Change% line. Sales have increased 26.44% per year, comparing favorably to the 20% industry pace.

### *Profit Margin*

To perform this computation, choose Profit Margin from the template menu on the main screen. Your division contributes \$724,500,000 in revenue. The costs associated with revenue are \$580,000,000. What is the profit margin?

<b>Variable</b>	<b>Entry</b>	<b>Comments</b>
Clear...		Sets the display to its default values
Cost	580,000,000	
Price	724,500,000	

Compute the profit margin by selecting “?” on the Margin% line. The profit margin is 19.94%.

### *Markup Price*

To perform this computation, choose Markup from the template menu on the main screen. The clothing is sold at a 25% markup on cost. What is the price if the cost is \$29.99?

<b>Variable</b>	<b>Enter</b>	<b>Comments</b>
Tap the Clear... button		Sets the display to its default values
Method	% of Cost	
Cost	29.99	
Markup%	25	

Compute the price by selecting “?” on the same line. The price is \$37.49.

## Discount

To perform this computation, choose Discount from the template menu on the main screen. The coupon is for 10% off the original cost. What is the discounted price if the cost is \$9.99?

Variable	Enter	Comments
Clear...		Sets the display to its default values
Price	9.99	
Discount%	10	

Compute the price by selecting “?” on the same line. The sales price is \$8.99.

## Tip Calculation 1

To perform this computation, choose Tip from the template menu on the main screen. At a team business lunch, your four person team (including you) goes to lunch. The total bill is \$45. With a 15% tip, what is the total and what should each person contribute?

Variable	Enter	Comments
Clear...		Sets the display to its default values
Bill	45	
Tip	15	Choose 15% from the pop-up list
#People	4	

Compute the Total by selecting “?” on the same line. The total is \$51.75 and each person should contribute \$12.94 (Ttl/Person).

## Tip Calculation 2

For the example above, what is the tip? Compute the tip amount by tapping "Tip", selecting "Tip\$" and then selecting “?” on the same line. The tip comes to \$6.75.

# Calendar

---

Calendar computations include both date and time computations.

## Date Calculations

Dates can be computed using an actual calendar year, the 30/360, actual/360 or actual/365 day-count method.

- **Method:** the day-count method. See the section on Template Preferences under Template & Variable Settings.
- **Date 1:** the date to compute from.
- **Date 2:** the date to compute to.
- **Difference:** the difference in number of days.

Method:	▼ Actual	
Date 1:	Thu 4/25/02	?
Date 2:	Thu 4/25/02	?
Difference:	0	?

## Time Calculations

Times are displayed in either standard (am/pm) or 24-hour format, depending on the localized time format set in the device's system settings (see your device manual for details).

The top section of the template performs time difference calculations:

- **Time 1:** the beginning time set in increments of 5 minutes.
- **Time 2:** the ending time set in increments of 5 minutes.
- **Diff H.MM/Diff Hrs:** the difference between the two times. "Diff H.MM" displays in hour-minute format (5 hrs, 45mins would display as 5.45). "Diff Hrs" displays as fraction of an hour.

Time 1:	12:00 am	?
Time 2:	12:00 am	?
Diff H.MM:	0.00	?
Time:	12:00 am	?
HH.MMSS:	0.0000	?
Sum:	12:00 am	?

The bottom section performs time addition calculations:

- **Time:** starting time.
- **HH.MMSS/HrsFrac:** time duration. "HH.MMSS" displays time in hour, minute, second format (4hrs, 7mins, 30sec would display as 4.0730). "Hrs.Frac" displays time as a fraction of an hour.
- **Sum:** the end time.

## Examples

### *Date*

Go to the Calendar – Date template to compute this problem. Vacation begins on October 13, 2002. Today is August 18, 2002. How many actual days until vacation?

Variable	Enter	Comments
Tap the Clear...		Sets the display to its default values button
Date 1	8/18/03	Enter August 18, 2003
Date 2	10/13/03	Enter October 13, 2003

Compute the difference in days by selecting "?" on the "Difference" line. There are 56 days until vacation.

### *Time Difference*

Go to the Calendar – Time template to compute this problem. When billing time, the project began at 12:15pm and concluded at 4:50pm. If you bill at \$30 per hour, how should you bill?

Variable	Enter	Comments
Tap the Clear...		Sets the display to its default values button
Time 1	12:15pm	
Time 2	4:50pm	

Make sure Diff Hrs is showing instead of Diff H.MM. Compute the difference by selecting “?” on the same line. This project took 4.5833 hours (4 hours, 35 minutes). To finish the calculation, select the Diff Hrs value and multiply by 30. You should bill \$137.50 for your work.

### *Time Sum*

Go to the Calendar – Time template to compute this problem. If you start driving at 3:15 pm and the trip will take 5hrs, 45mins, what time will you arrive?

<b>Variable</b>	<b>Enter</b>	<b>Comments</b>
Tap the Clear... button		Sets the display to its default values
Time	3:15 pm	
H.MMSS	5.45	

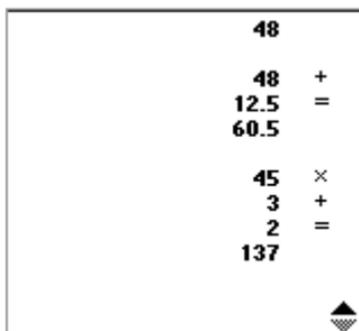
Compute the sum by selecting “?” on the same line. You will arrive at 9:00pm.

## Calculation Log

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The calculation log displays computations as they are entered, which makes double-checking easier.

Access the calculation log by choosing its option from the powerOne button in the main calculator.



To scroll the list, choose the scroll arrows or scroll buttons.

# Appendix

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The appendix contains additional information pertinent to the use of the product.

## Graffiti

Graffiti® entry is supported for both the main calculator and input screen. To learn how to draw each character, see your device owner's manual.

Character	Function	Character	Function
0	Zero	<back> <space>	Backspace
1	One	c	C/CE
2	Two	+	Add
3	Three	-	Subtract
4	Four	x *	Multiply
5	Five	/	Divide
6	Six	=	Equals/Enter
7	Seven	(	Lt Paren
8	Eight	)	Rt Paren
9	Nine	s	Store
. ,	Decimal Pt	r	Recall
n	Sign	<return>	Save
e	Exponent		

Note that the Graffiti shift indicator is in the view window.

## Structure of Function [func] List

The “func” function button displays all available math functions. These functions are broken into categories for faster access, as follows:

### *Math*

- Percent Change [ %x ]
- Reciprocal [  $1/x$  ]
- Power [  $y^x$  ]
- Root [  $\sqrt[y]{x}$  ]
- X-Squared [  $x^2$  ]
- Square root [  $\sqrt{x}$  ]
- Natural Log [ ln ]
- Anti-Log [  $e^x$  ]
- Logarithm [ log ]
- Power of 10 [  $10^x$  ]

### *Number*

- Exponential notation [ EE ]
- Show
- Last
- Pi ( constant equal to 3.14159...)
- Left Parenthesis [ ( ]
- Right Parenthesis [ ) ]

### *Trigonometric (trig)*

- Trigonometric functions [ sin, cos, tan ]
- Arc-trigonometric functions [ asin, acos, atan ]
- Hyperbolic function [ sinh, cosh, tanh ]
- Arc-hyperbolic functions [ asinh, acosh, atanh ]

## Contacting Infinity Softworks

**Web:** [www.infinitysw.com](http://www.infinitysw.com)

**Email:** [support@infinitysw.com](mailto:support@infinitysw.com)

**Mail:** 1315 NW 185<sup>th</sup> Avenue #180, Beaverton OR 97006 USA

Check Infinity Softworks web site for telephone support numbers and times.

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The powerOne Personal calculator does not support system find functionality.

Rev. 1

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