



Calc XLS 4.0 User Guide

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Introduction

Welcome to the Calc XLS, a spreadsheet that blends mobility with the right amount of muscle for number crunching. Open and edit excel documents on the go, track expenses, or take some work home on the train with you. Calc XLS gives you all this and more.

- View & edit native Excel® files (.xls format Excel® 97 and up)
- Construct formulas using over 200 functions
- Transfer files to and from your computer via Email, WiFi or USB
- Use up to 32,000 rows by 256 columns
- Support for cut, copy, paste, undo, and redo
- Support for multiple sheets
- Support for iOS 6 and higher
- Find and replace values, text or results
- Hide rows and columns
- Split and freeze panes
- Merge Cells

In This Chapter:

Philosophy of Calc XLS
Software Updates

Philosophy of Calc XLS

Calc XLS is a full-featured spreadsheet for iOS. While it doesn't have every feature of Microsoft Excel®, it has enough features to allow you to take and edit your spreadsheets on the go.

The screenshot shows an iPad screen with an Excel spreadsheet titled "Invoice.xls - Invoice". The spreadsheet is divided into columns A through F. The content is as follows:

	A	B	C	D	E	F
1	Company Name					INVOICE
2	Company Slogan					DATE: 5/10/13
3	http://www.ourcompany.com					CUSTOMER #: 12345
4	Street Address					INVOICE #: 12345
5	City, ST ZIP					
6	Phone: 000-000-0000					
7	Fax: 000-000-0000					
8	Email: shipping@ourcompany.com					
9	BILL TO:					SHIP TO:
10	Name					Name
11	Company Name					Company Name
12	Street Address					Street Address
13	City, ST ZIP					City, ST ZIP/POSTAL CODE
14	COUNTRY					COUNTRY
15	Phone					Phone
16	ALLES RE	P.O. #	SHIP DATE	SHIP VIA	F.O.B.	Terms
17	JOHNNY	123456	10/10/2013	FREIGHT		NET 30
18						
19	ITEM #	DESCRIPTION	QTY	UNIT	TOTAL	
20	1234567	Widget XYZ	3	\$ 39.99	\$ 119.97	
21	9876543	Widget ABC	2	\$ 86.95	\$ 173.90	
22					\$ -	
23					\$ -	
24					\$ -	
25					\$ -	
26					\$ -	
27					\$ -	
28					\$ -	
29					\$ -	
30					\$ -	
31					\$ -	
32					\$ -	

At the bottom of the screen, a virtual keyboard is visible, showing numbers 1-0, punctuation, and function keys like "Done", "undo", and "redo".

Software Updates

The iOS has a built-in mechanism for alerting you about available application updates.

On the main screen screen of your device the App store icon shows a red badge if there are updates to any of your applications available.

- 1 Tap the App Store icon.
- 2 Tap the “Updates tab

Troubleshooting

If you have a question about using Calc XLS, try finding the answers you need in this document. Alternatively, try the Knowledgebase on the Mariner Software website.

[Mariner Software Knowledgebase](#)

You may also visit our online forum here:

[Mariner Software Forum](#)

If you still can't find the information you need, contact Mariner Software:

Web: [Customer Support](#)

Email: support@marinersoftware.com



Calc XLS Notes

Notes

Before using Calc XLS, you should have a basic knowledge of the iOS. You should understand tapping, swiping, double-tapping, tap-dragging, and how to choose menu commands. You should also know how to operate dialog boxes, alerts, and use copy and paste. If you aren't familiar with these or other basic operations or terminology, refer to the Apple documentation included with your device.

Errors

If you find any bugs or errors in the program, please send detailed information to support@marinersoftware.com.

If the app should crash, its usually helpful for us to know the version of Calc XLS you are using, the version of iOS, and, the model of device with which the problem occurred. Most often, providing us with the file that caused the crash can allow us to quickly resolve the issue.

Thanks

Thank you to those who have helped improve Calc XLS with suggestions, information or bug reports over the years.

Calc XLS Basics

Just like it's desktop brethren, Calc XLS can tackle your spreadsheets with aplomb, even do it while you are on the go.

In This Chapter:

The User Interface

Creating a Spreadsheet

Deleting a Spreadsheet

Renaming a Spreadsheet

The User Interface

The following is a breakdown of the user interface.

Main Window

Status Bar

File name

Formula bar

Column Headers

Cells

Toolbar

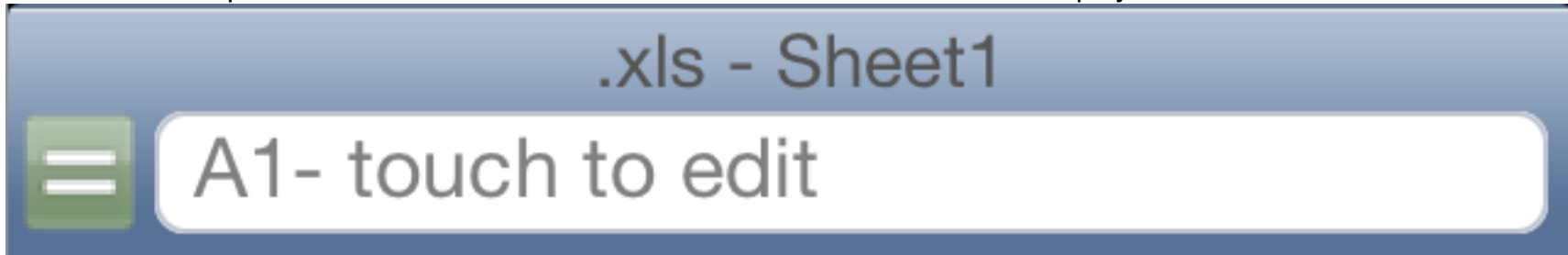
[illegible]

A breakdown from top to bottom (iPhone).

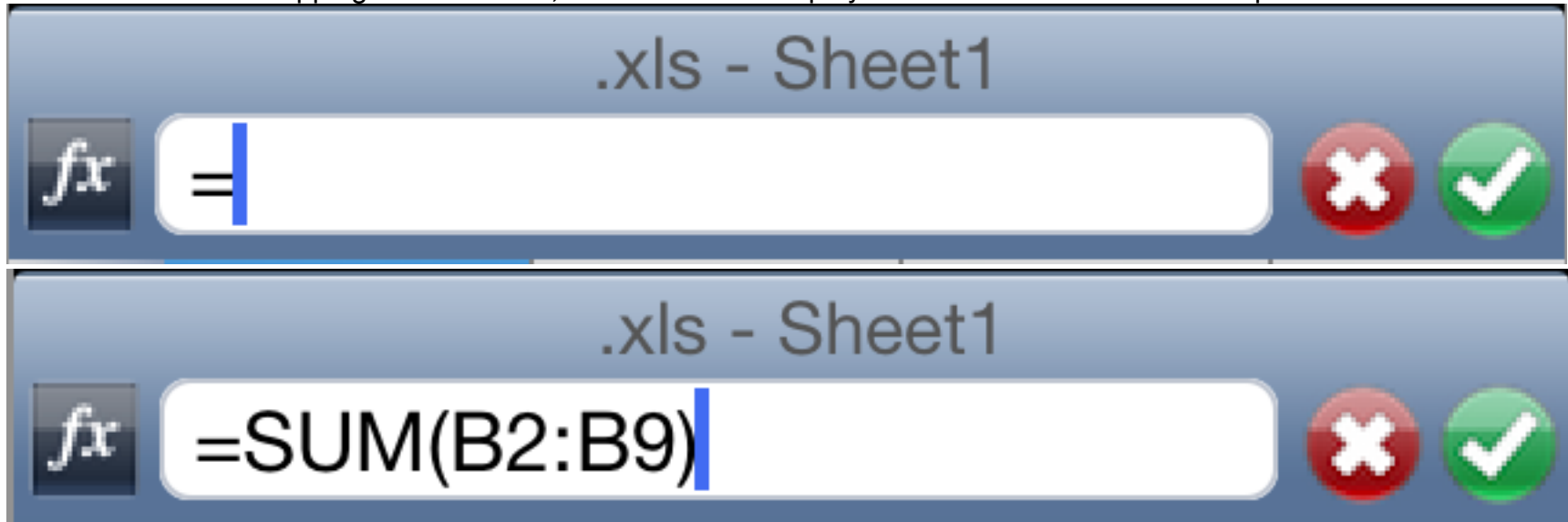
Status Bar - Contains info about your device, your network, WiFi signal, time, location services, battery, etc..



Formula Bar - Tap here to enter a formula or value. The contents of the cell are displayed or the current cell address.



Formula Bar - After tapping the '=' button, the formula bar displays a function button and then tap enter or cancel button.



Formula Bar (iPad) - Tap here to enter a formula or value. The contents of the cell are displayed or the current cell address.



Formula Bar (iPad) - After tapping the '=' button, tap the function button, enter your formula and then tap enter or cancel button.



Worksheet area - Column headings, Row headings, & Cells

	E	F	G	H	I	J	K	L	M
31		Curr.	If Tiger shoots...						
32		Score	63	64	65	66	67	68	69
33	Tiger Woods	-7
34	Stephen Ames	-4	59	60	61	62	63	64	65
35	Woody Austin	-3	58	59	60	61	62	63	64
36	John Senden	-2	57	58	59	60	61	62	63
37	Ernie Els	-1	56	57	58	59	60	61	62
38	Boo Weekley	0	55	56	57	58	59	60	61
39	Nathan Green	0	55	56	57	58	59	60	61
40	Kevin Sutherland	0	55	56	57	58	59	60	61
41	KJ Choi	0	55	56	57	58	59	60	61
42	Aaron Oberholser	0	55	56	57	58	59	60	61
43	Adam Scott	0	55	56	57	58	59	60	61
44	Scott Verplank	0	55	56	57	58	59	60	61
45									
46	Score		63	64	65	66	67	68	69

Toolbar - Contains five buttons:



File

Edit

Options

View

Format

Creating a Spreadsheet

A spreadsheet file or “Workbook” is easy to create in Calc XLS, here’s how:

- 1 Tap on the File button.

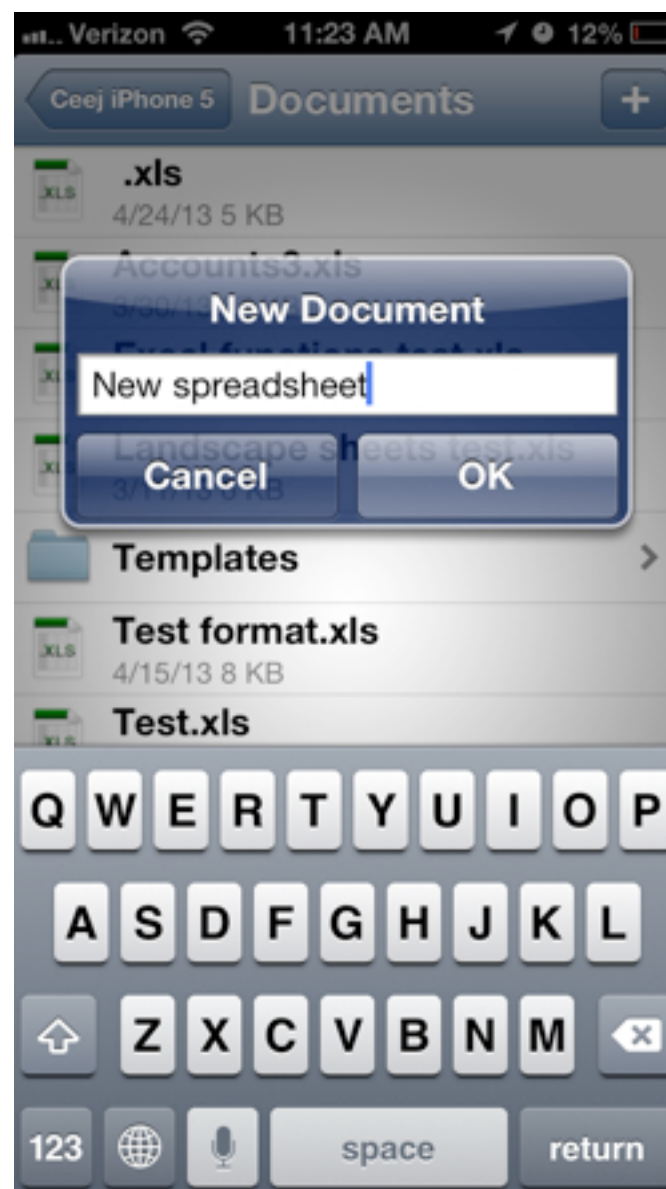
The Documents window appears.

- 2 Tap the  button

A New Document alert appears.

- 3 Enter the title of your document.
- 4 Tap the OK button when you are finished.

The new document opens.



Deleting a Spreadsheet

Here's how to delete a spreadsheet in Calc XLS:

- 1 Tap the File menu button.
- 2 Choose Documents from the menu

The documents window appears.

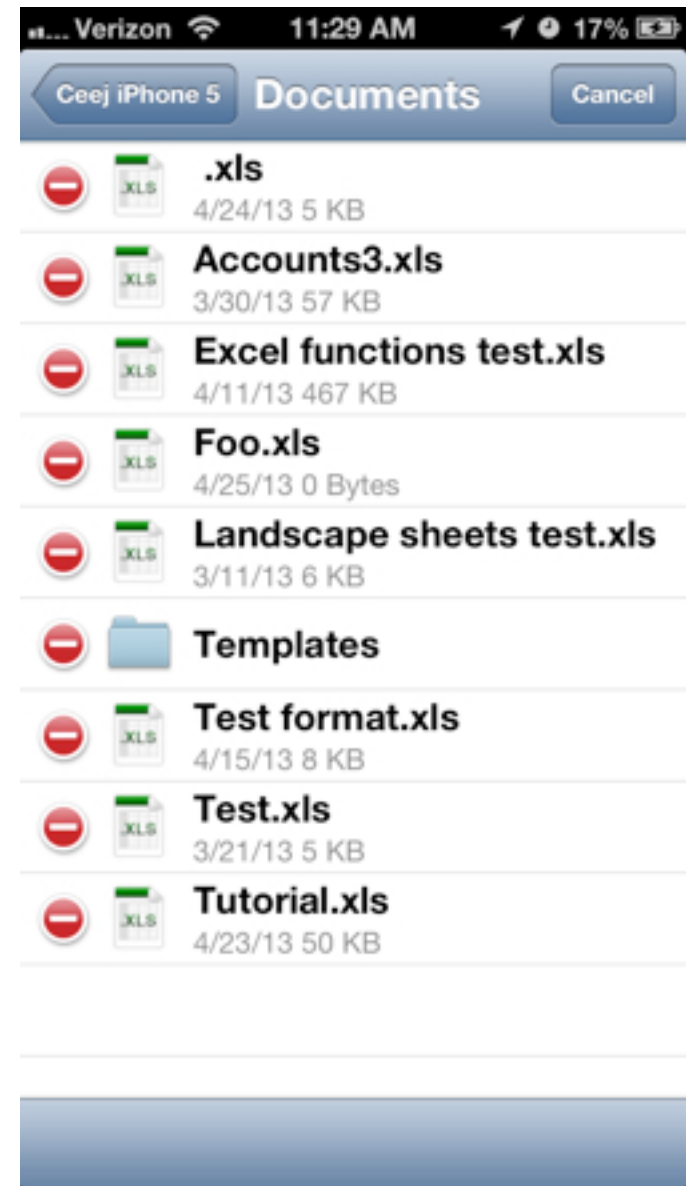
- 3 Tap the Edit button.

Badges appear next to each file.

- 4 Tap a "minus" badge

A delete button appears on the same row.

- 5 Tap the Delete button.



Renaming a Spreadsheet

Here's how to rename a spreadsheet in Calc XLS:

- 1 Tap on the documents button on the toolbar and select "Save As...".

An alert appears.

- 2 Type a new name for your document.

An alert appears.

- 3 Tap OK.



File Transfer

Calc XLS has several built-in methods for transferring files.

- Dropbox
- Open In...
- WiFi (web server)
- iTunes (WiFi or USB)

In This Chapter:

Dropbox
Open In...
WiFi Transfer
iTunes (WiFi or USB)
Email Transfer

Dropbox

Using dropbox with Calc XLS is easy. The direct integration with Dropbox allows you to store and open files on Dropbox here is more info how:..

① Tap on the File menu and select Documents.

You'll See a Dropbox Section and a Documents section.

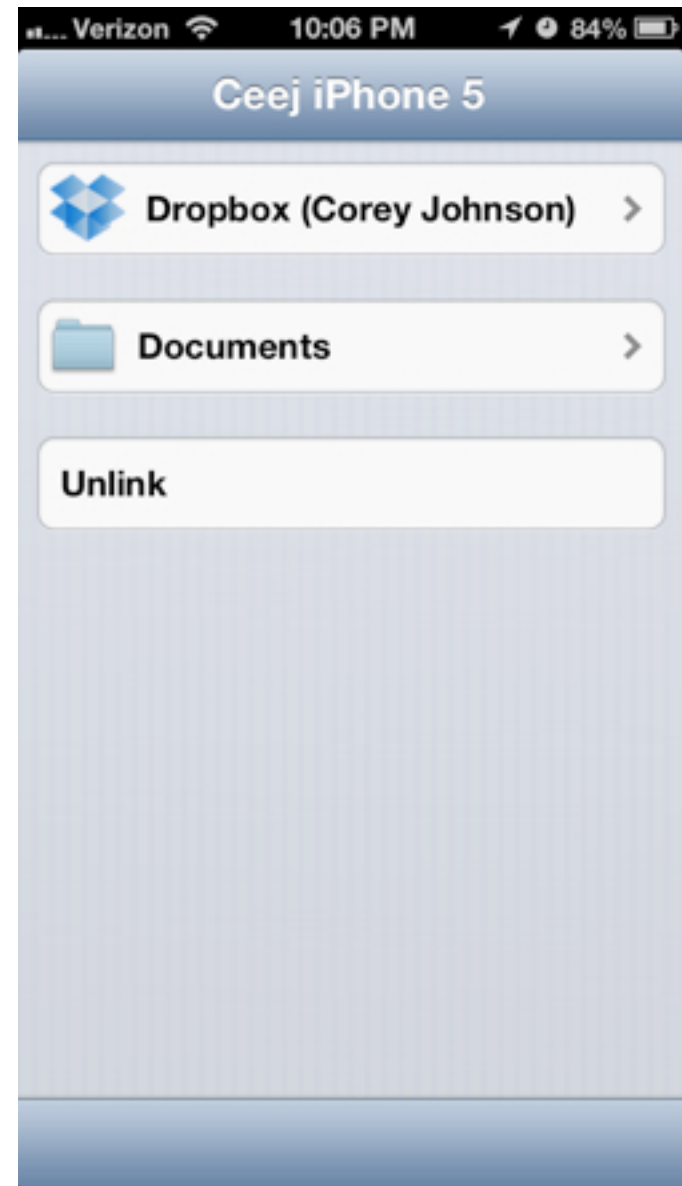
② Tap on Dropbox to "link" to your dropbox account.

③ Enter your dropbox login and password.

Once the account is linked you'll have access to the files within the app folder in Dropbox.

Note: You'll need to sign up for a dropbox account.

[http://
www.dropbox.com](http://www.dropbox.com)



Using Open In...

Here's how to transfer files to the cloud or other apps:

- 1 Open a file.
- 2 Tap the file menu button, then tap, "Open In..."
A menu of apps that support the file appear, including "Open in Box".
- 3 Tap on the Box app icon.

The Box.app launches and an Upload screen appears.



Transferring Files Via Web Server

Here's how to transfer files using the built-in web server.

1 Tap on the files button and tap Documents.



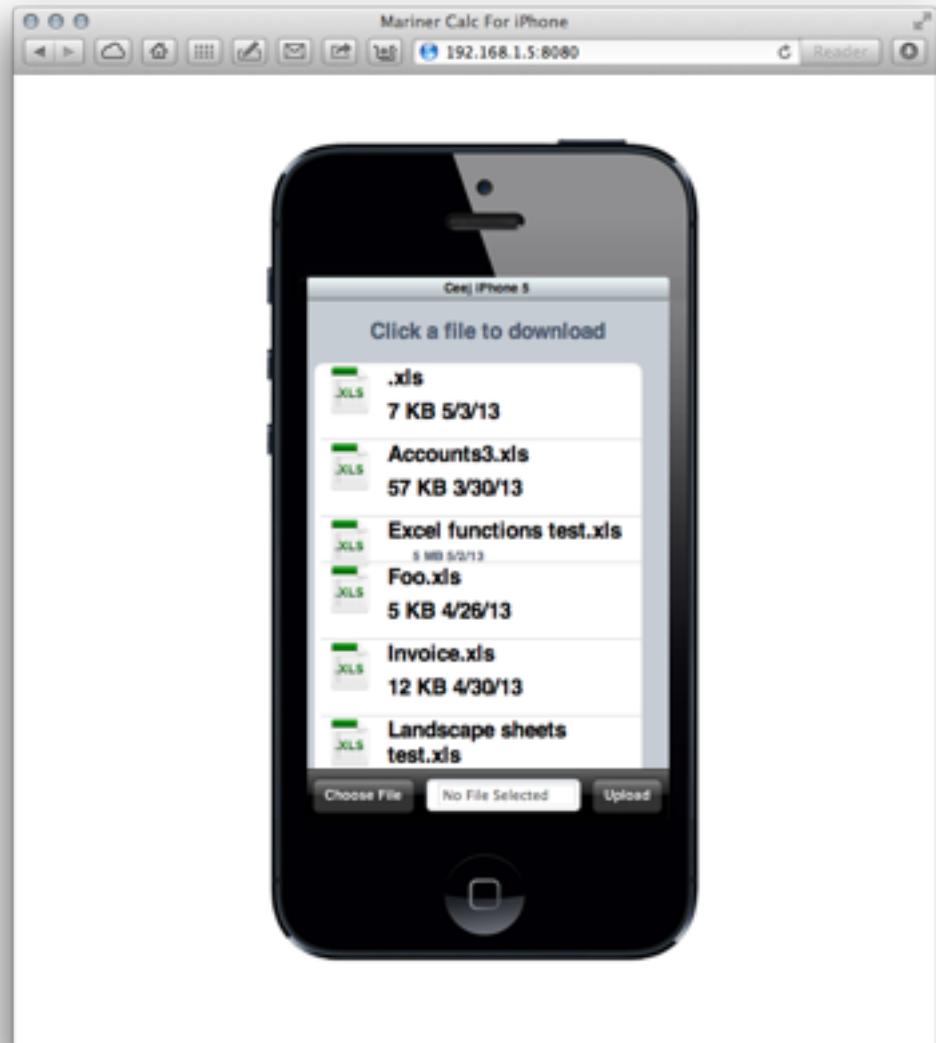
2 Tap the sharing button.

3 Type the web address displayed into your web browser.

A screen appears that allows you to download files or upload files.

To Download:
Click on a file in the list.

To Upload:
Click "Choose File" then chose a file.
Next choose "Upload".



Transferring files via iTunes

Here's how to transfer files via iTunes (USB or WiFi)

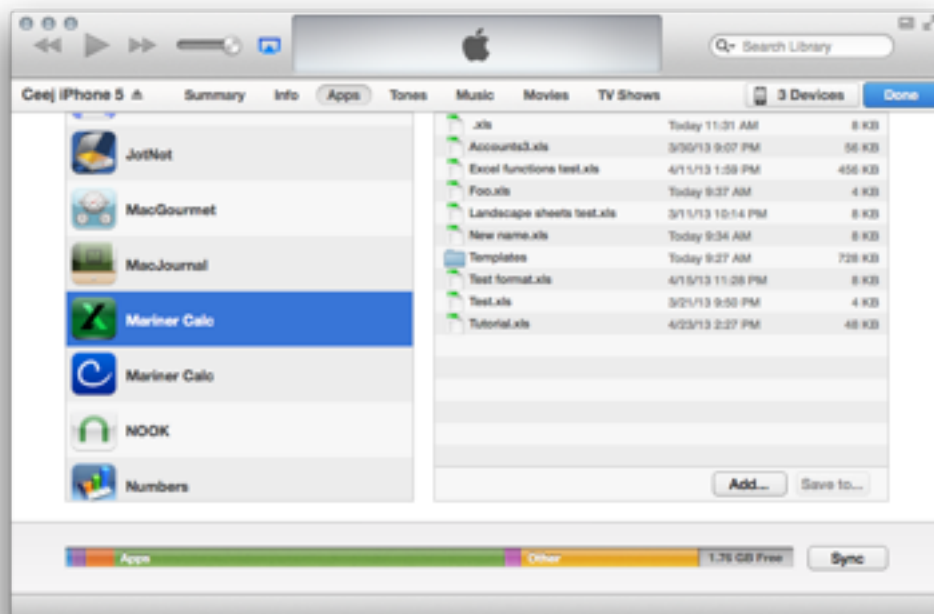
- 1 On your Computer launch iTunes
- 2 Select your device (*sidebar or pop-down*)
- 3 Choose the Apps tab
- 4 Scroll down to File Sharing and select Calc XLS

A list of files appears.

- 5 To download, select a file and click “Save to...”
To upload, drag and drop a file into the file window or chose “Add...”.

Note:

You must be on the same network as your computer to transfer files wirelessly (WiFi).



Sending Files via Email

Here's how to transfer files via Email

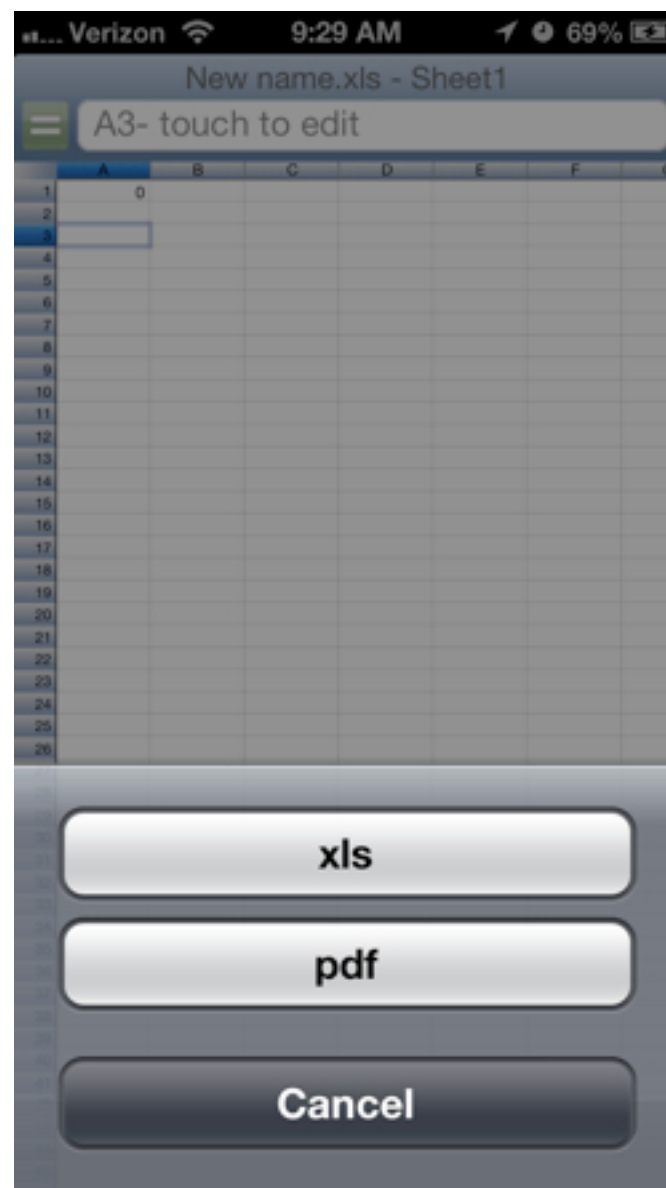
- 1 On your Computer launch iTunes
- 2 Select your device (*sidebar or pop-down*)
- 3 Choose the Apps tab
- 4 Scroll down to File Sharing and select Calc XLS

A list of files appears.

- 5 To download, select a file and click “Save to...”
To upload, drag and drop a file into the file window or choose “Add...”.

Note:

You must be on the same network as your computer to transfer files wirelessly (WiFi).



Receiving files via Email

Here's how to open a file received in an email.

- 1 From Mail app, tap the attachment and hold.

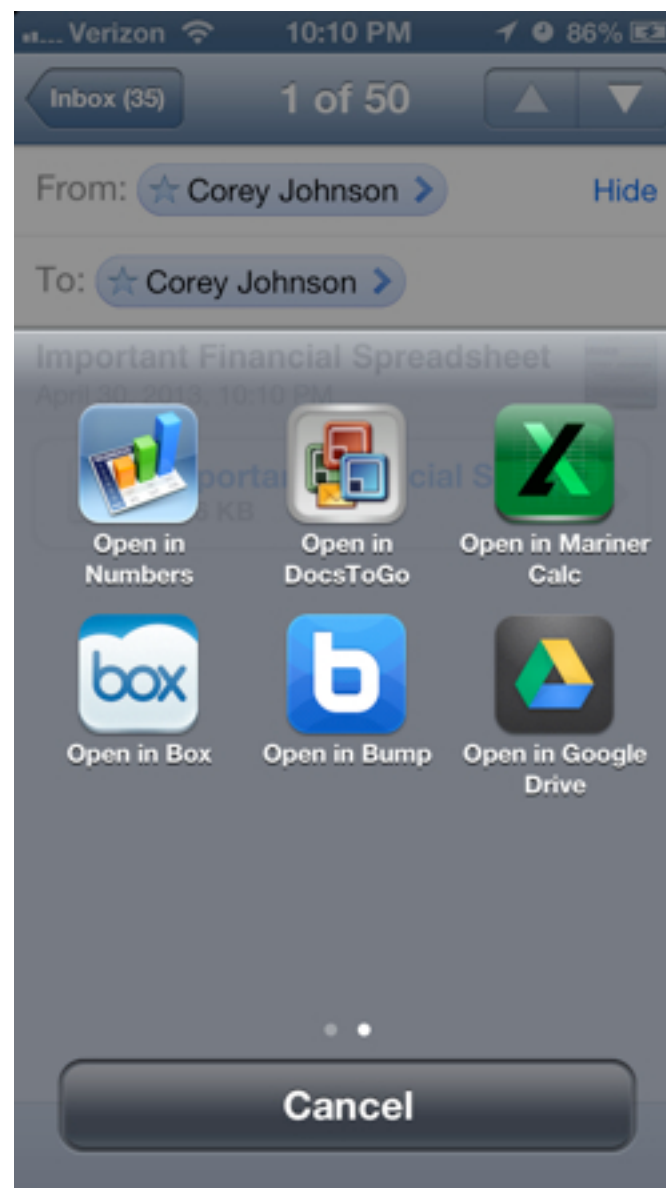
The Open In... menu appears.

- 5 Tap "Open in Calc XLS".

Calc XLS launches and the file is copied into the documents folder for the app.

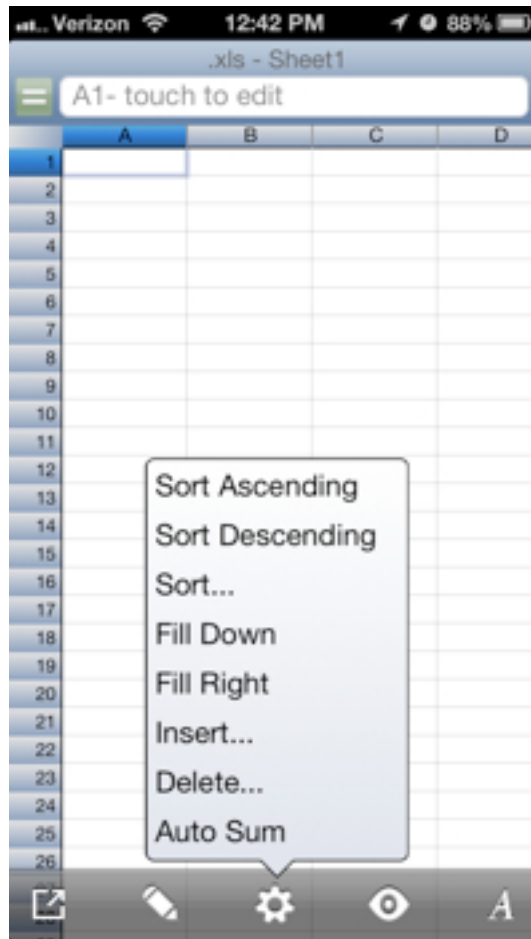
Note:

The list of applications includes the apps that declare (to the iOS) to handle the file type of



Options

Calc XLS has several features for sorting, fill, insert, and deleting cells. Each of these actions is found on the “Options” menu.



In This Chapter:

Sorting

Filling

Inserting

Deleting

Summing a Range Automatically

Sorting

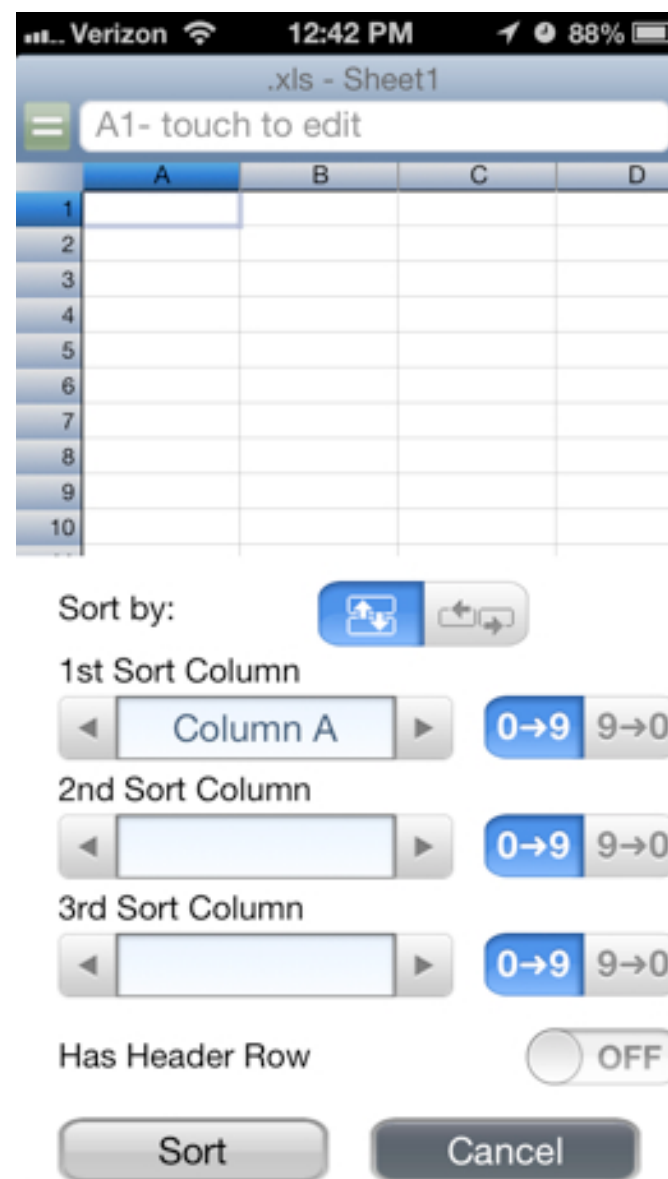
There are several different ways to sort. There are three sort commands, Sort Ascending, Sort Descending, and Sort... Below we'll cover the sort options.

- 1 Tap Options then tap Sort...
A sheet slides into view.

There are many options available. You can sort by rows or columns, set up to three columns or rows to use as criteria for the sort. Set each sort criteria to sort ascending or descending. Choose whether or not your sort range has a header row (A top row that contains the names of the columns you'd prefer not to sort).

- 2 Once you've chosen the sort settings, Tap Sort.

The sheet slides out of view and the sheet is sorted.

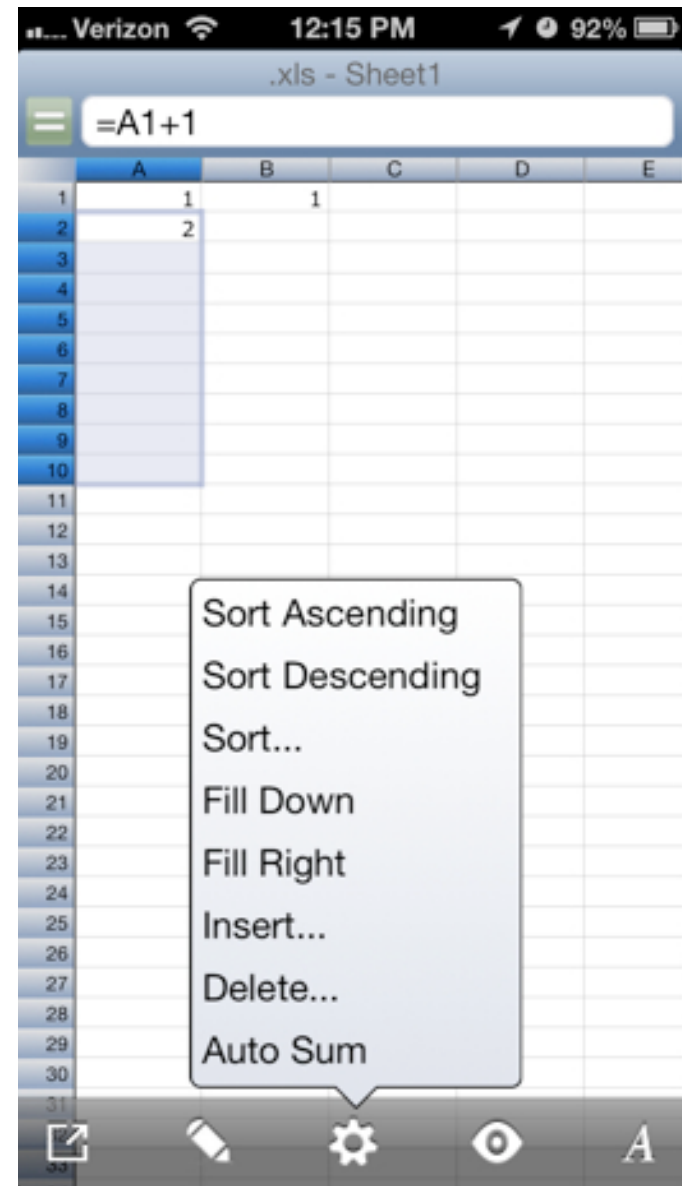


Filling

Spreadsheets aid data entry by allowing you to fill-in cells in an intelligent manner.

- 1 Select a range of cells that includes the cell holding the data you wish to intelligently replicate.
- 2 Tap Option then tap Fill Down.

The cells selected are filled with the info from the first cell selected in an intelligent fashion. i.e. the formulas values and/or addresses can be advanced by one A1, B1, C1, D1, ... or A1, A2, A3, A4,13, 14, 15, 16, 17, ...



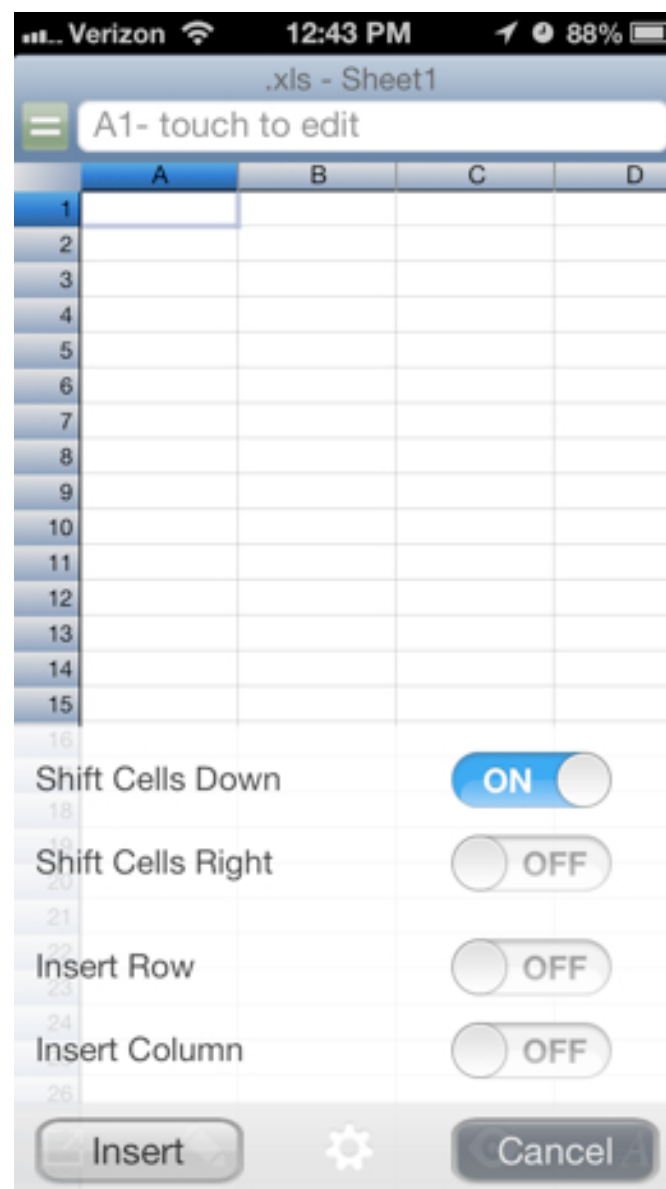
Inserting or Deleting

Spreadsheets allow you to insert or delete cells, rows or columns. The app asks you how to handle the situation. You can choose to move cells up down, left right depending on your desired outcome.

- 1 Select a range of cells where you'd like to insert some new cells (or delete).

An alert appears asking what you'd like to do.

- 2 Tap the desired outcome and tap Insert (or delete).



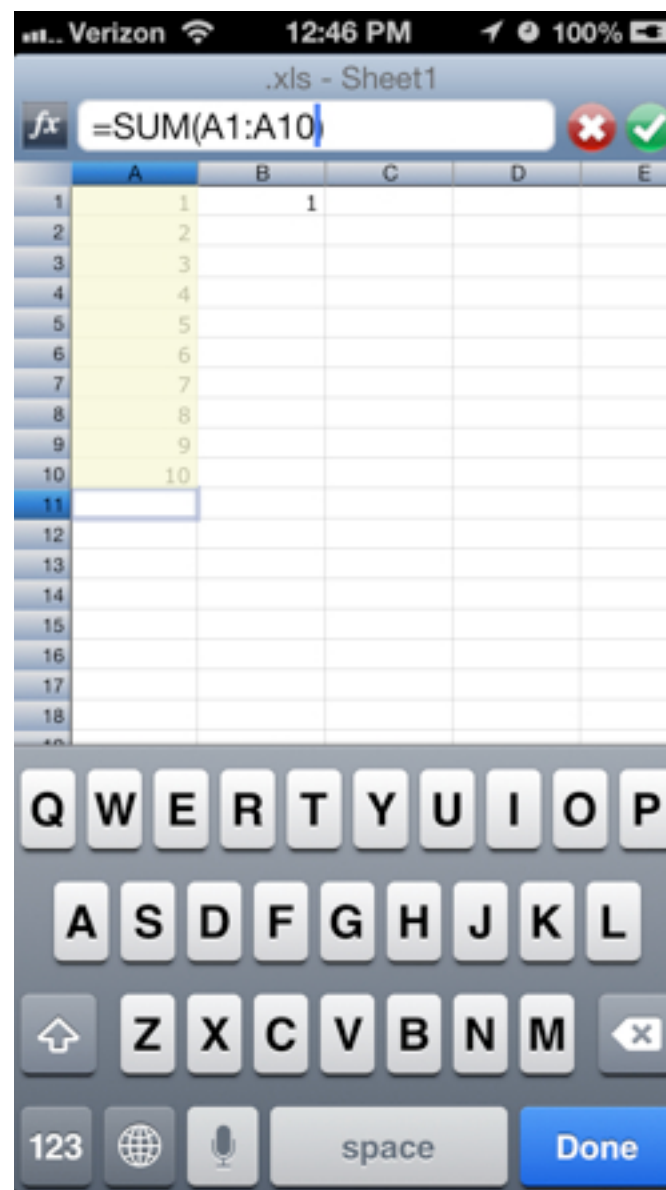
Getting the Sum Automatically

Spreadsheets aid data entry by allowing you to Auto Sum a range of cells. This is a helpful time saver so you don't always have to type a sum formula (the most used function in spreadsheets). Here's how:

- 1 Select a cell beside a range of cells you'd like to sum.
- 2 Tap Option then tap Auto Sum.

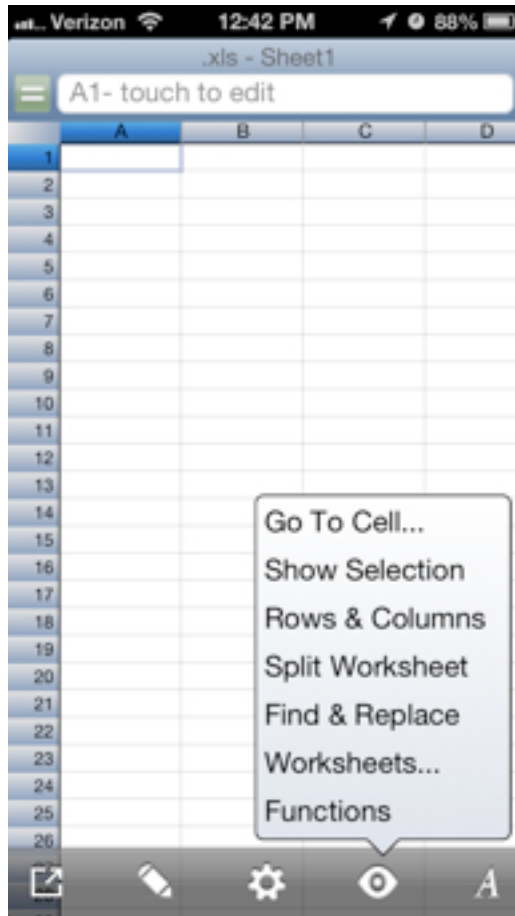
The Formula is written for you, the cells to be summed are highlighted, and the formula is ready.

- 2 Tap Done to accept the formula.



Using View Options

Calc XLS has several features that affect the view.



Go To Cell...

- Show Selection
- Rows & Columns
- Split Worksheet
- Find & Replace
- Worksheets...
- Functions

In This Chapter:

Going To A Cell...

Showing the Selection

Changing Column Width

Splitting & Freeze Panes

Finding & Replacing

Changing Worksheets

Go To Cell Address

Go To Cell allows you to scroll the user interface to display a cell by its address rather than using finger swipe gestures to scroll.

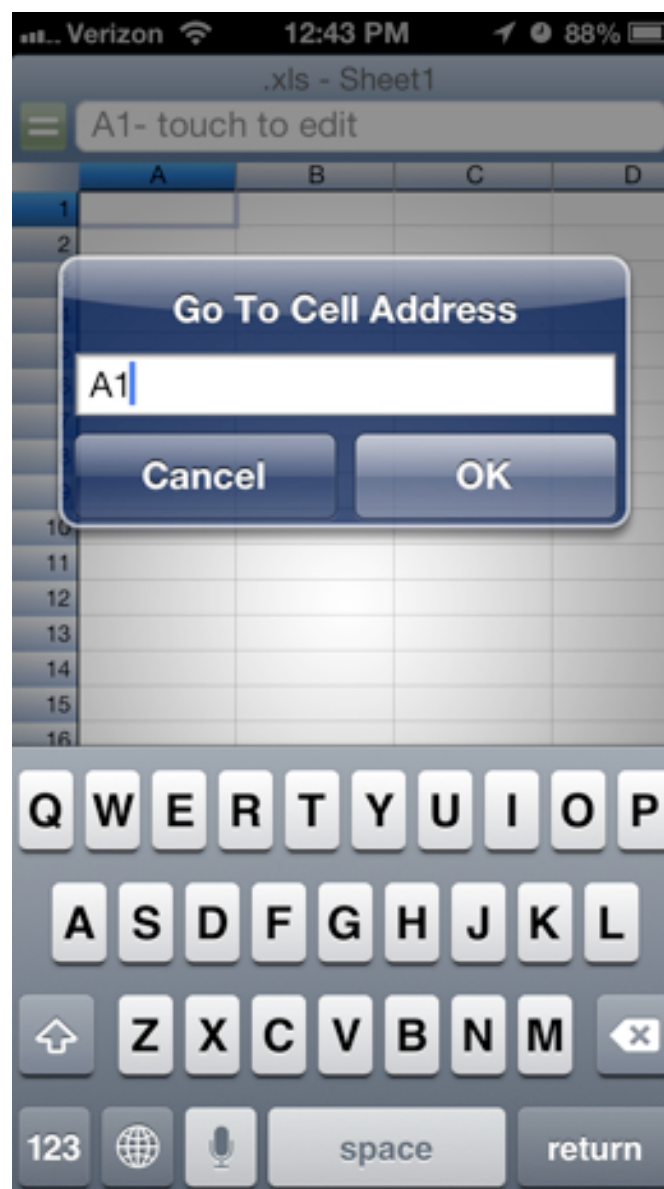
- 1 Tap View, Go To Cell...
- 2 Enter a cell address and tap OK.

The cell is displayed.

Show Selection

Show Selection allows you to find and/or see the currently selected cell or range.

- 1 Tap View, Show Selection.
- 2 The UI scrolls to the current selection.



Changing a Column Width

Here's how:

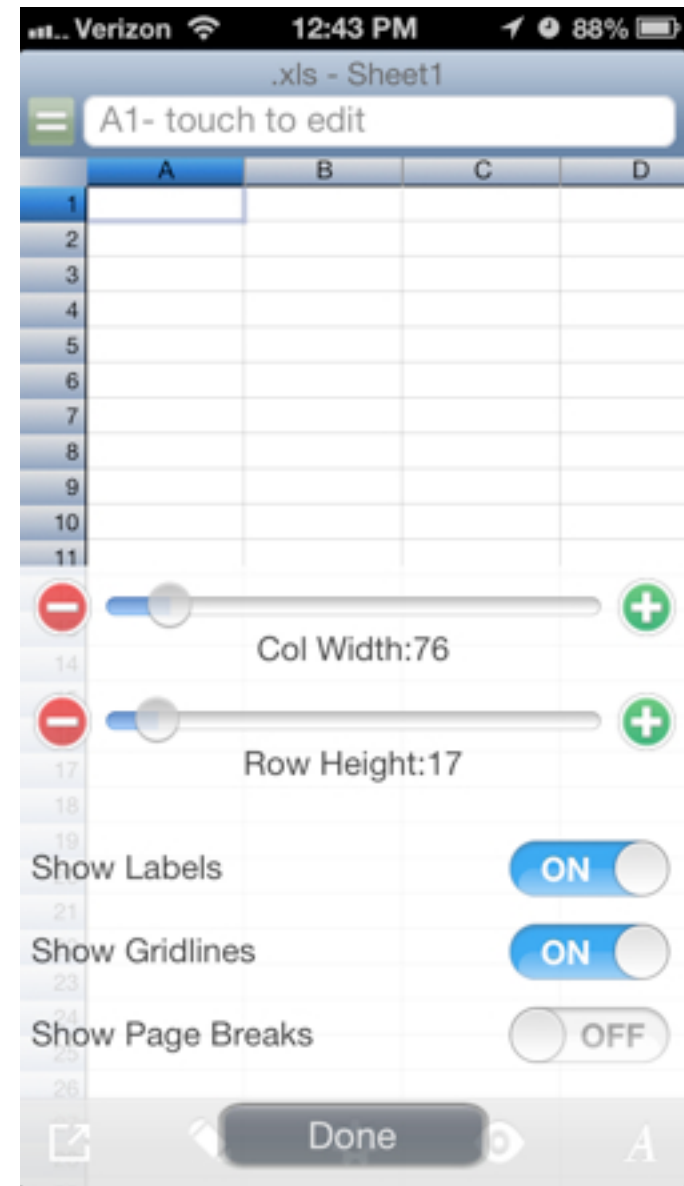
- 1 Tap on a column header to select the column.
- 2 Tap View then tap Rows & Columns.

The Rows & Columns sheet appears.

- 2 Tap and slide the slider to the right or left to increase or decrease the width of the column. Alternatively, tap on the (-) minus or (+) plus buttons to control the size one point at a time.

Note:

Changing a column's width to "0" effectively hides the column. To then restore it's width



Splitting and Freezing a Worksheet

Here's how:

- 1 Tap on cell or a row or Column where you'd like the split to occur.
- 2 Tap View then tap Split Worksheet.

The Split and Freeze sheet appears.

- 2 Tap and slide the slider to the right or left to turn on or off the freeze panes and horizontal and vertical splits.

Note:

Turning on Freeze Panes without first splitting the worksheet split, and then freezes the worksheet.



Finding and Replacing

You can find and replace values, here's how:

- 1 Tap on View and then Tap Find & Replace.

The Find & Replace Sheet appears.

- 2 Enter something to search for and optionally, something to replace it with.

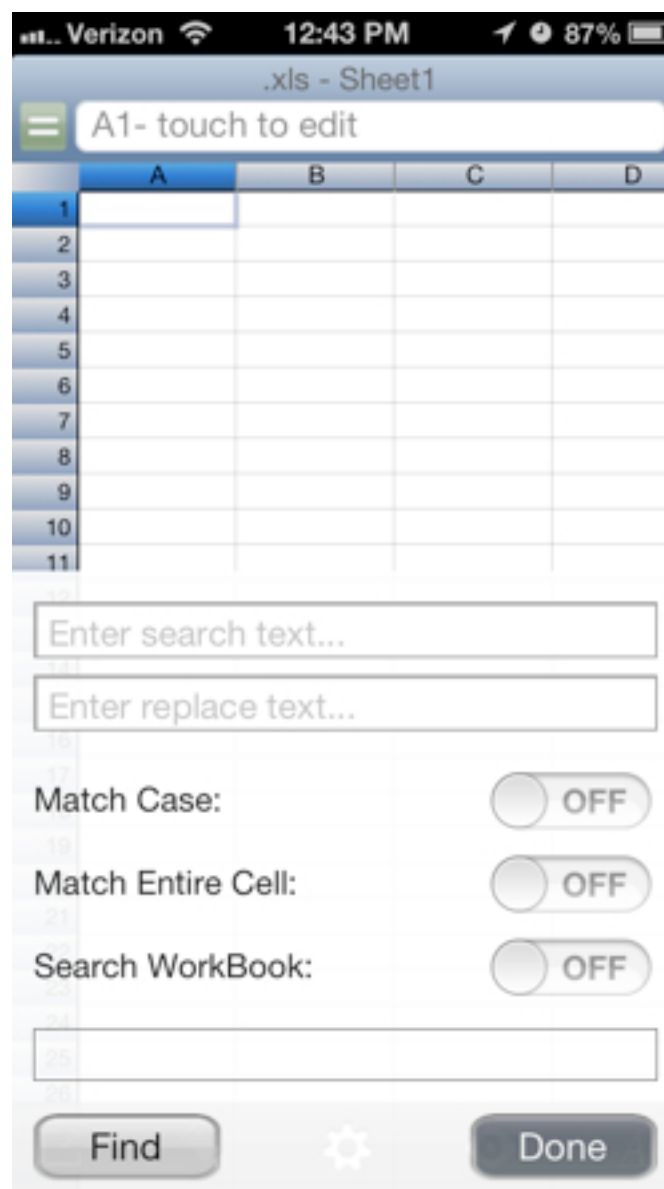
- 3 Select any options like whether or not to match the case (uppercase or lowercase), Match the entire cell or just a partial match, and whether to search just the current worksheet or to perform the task on the entire workbook (all the sheets).

- 4 Tap Find.

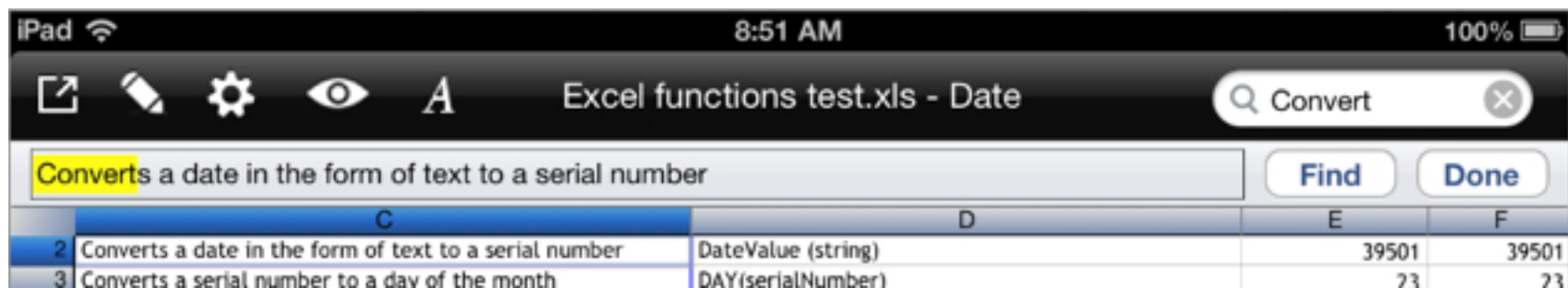
If the text is found, the screen will scroll to select and display the cell.

- 5 To find further instances of the search text, tap Find once more.

To replace the text, Tap the Replace button which appears between the Find and Done buttons.



Finding on an iPad



The iPad has a search bar on the top toolbar, here is how to use it:

- 1 Tap on the search field in the toolbar (upper-right corner).

A search bar drops down over the formula bar.

- 2 Enter the term you wish to find.

The UI scrolls to the first found incidence of the search string.

- 3 Tap Done or Find to find the next occurrence of the search string.

Creating a Worksheet

A Spreadsheet file is also called a workbook. A workbook is made up of one or more worksheets. Here is how to create sheets.

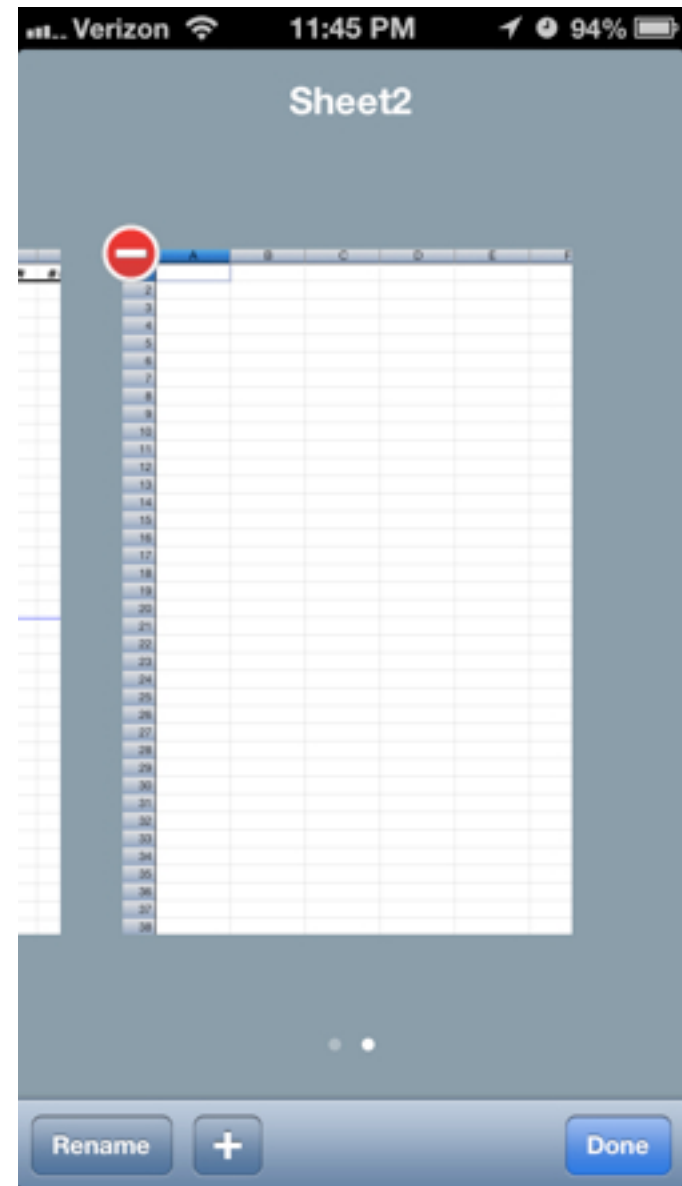
- 1 from the View menu, tap Worksheets...

The worksheet view opens

- 2 Tap the Edit button.
- 3 From the bar on the bottom, tap the plus (+) button.

An alert appears.

- 4 Enter a name and tap OK.



Changing Worksheets

You may want to view or reference cells on another sheet. Here is how to change between worksheets.

- 1 From the View menu, tap Worksheets...

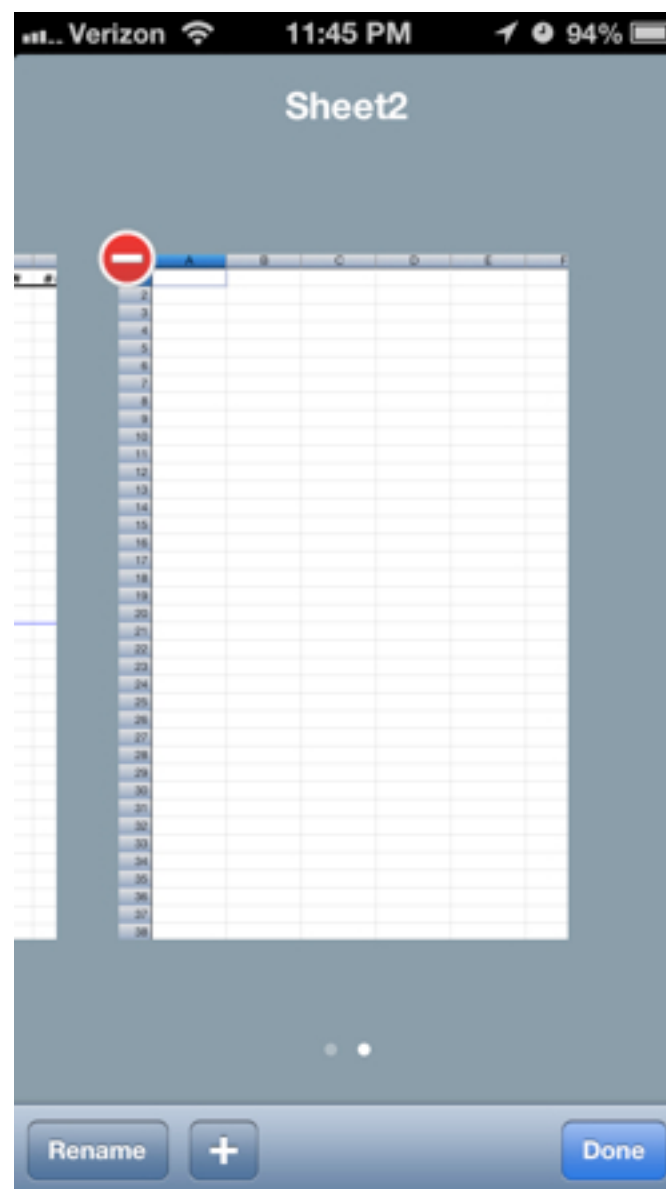
The worksheet view opens.

- 2 Swipe to the left to scroll between sheets.

- 3 Tap a sheet to select it and exit the view.

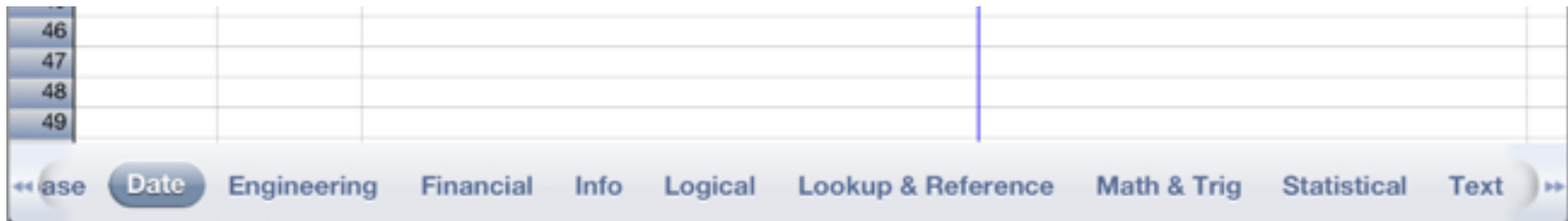
Note:

The small white dots below the sheets are the page indicators and will show you how many sheets you have



Changing Worksheets on an iPad

The iPad interface includes the previous method for changing worksheets but it also includes a much more intuitive and easy method. Each sheet is displayed on a sheet bar across the bottom.



- 1 Simply tap the button with the name of a worksheet to switch to that worksheet.

Using References

References are easy to create. A reference is a pointer to another cell or range of cells. A best practice is to use references so that you only enter a value once and if it changes all the formulas update automatically. There are several forms of references and it pays to know them.

- **Cell Reference**
- **Range Reference**
- **Sheet Reference**
- **3D Reference**
- **External Reference**

In This Chapter:

Making a Sheet Reference

Making a 3D Reference

References come in two flavors, absolute or relative. An absolute reference is denoted by a dollar sign. A relative reference has no dollar sign. The \$ character indicates the address should not increment the column and/or row reference as you fill a range with a formula or as you copy and paste. For example, A1 is a relative reference, \$A\$1 is an absolute reference. If you enter =A1 in a cell and copy and paste that cell down a column, the '1' in the reference increments in each row. Thus, the formula in row 50 is =A50. Alternatively, entering =\$A\$1 in a cell and copy and paste down, the range reference remains \$A\$1 -- it does not increment as you fill or copy and paste down a column.

Absolute Styles:

\$A\$1 - Both the column and row reference are fixed. Neither are incremented or changed during a copy and paste or fill.

\$A1 - Only the column reference is fixed. It does not change during a fill or copy and paste, but the row changes.

A\$1 - Only the row reference is fixed. It does not change during a fill or copy and paste, but the column changes.

Making a Sheet Reference

You can make references to another cell address, range or even a cell or range on another sheet. references are the way to craft a reusable and helpful numerical model.

Single Cell reference =A1

Reference to a Range =(A3+A4)

Reference to a Range within a Function =SUM(A1:B5)

Sheet Reference =SHEET2!A1

Sheet reference to a Named Sheet ='January'!Z26

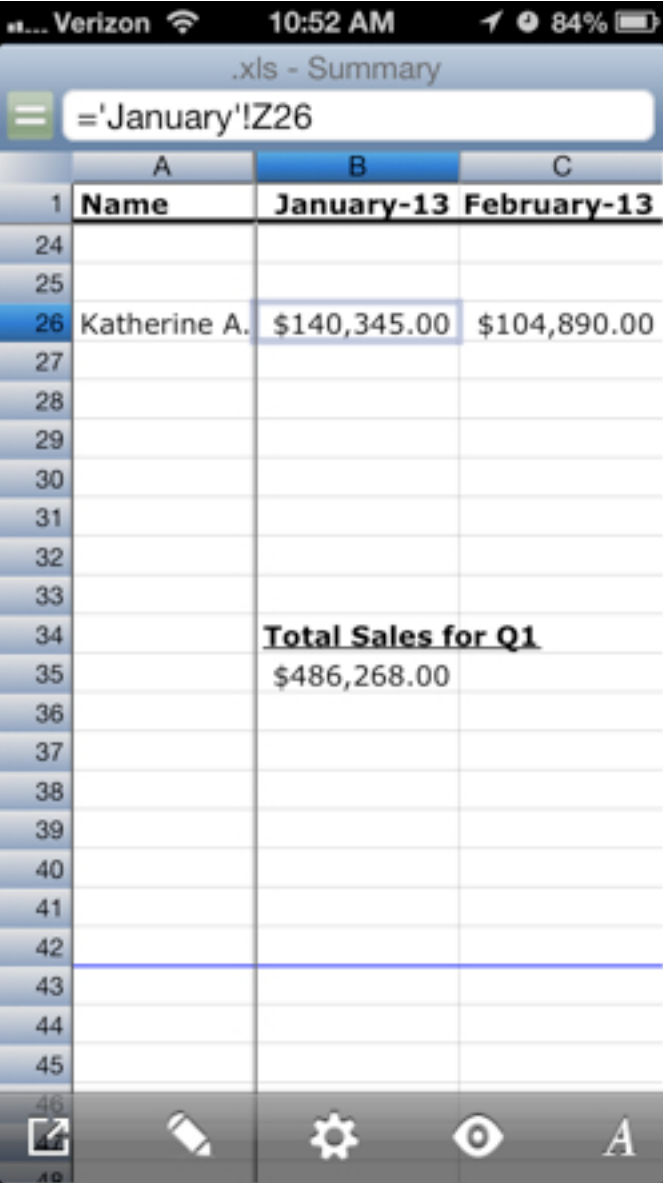
To make a reference to an address on a different sheet:

1. Enter "SHEET" followed by the number of the sheet, an exclamation point "!", and the cell address. You can also use the sheet's name, just be sure to put it inside of Single Quotes.

=SHEET2!A1 or ='January'!2A

External References - References to an address in another file are not supported at this time.

Note: While in the formula entry bar, touching a cell or range enters the address or range.



The screenshot shows a mobile Excel interface with a status bar at the top displaying 'Verizon', signal strength, time '10:52 AM', and battery level '84%'. The spreadsheet title is '.xls - Summary'. The formula bar at the top shows the formula `= 'January'!Z26`. The spreadsheet has three columns: A (Name), B (January-13), and C (February-13). The rows are numbered 1 through 46. Row 26 is highlighted, showing 'Katherine A.' in column A, '\$140,345.00' in column B, and '\$104,890.00' in column C. Row 34 contains the text 'Total Sales for Q1' in column B, and row 35 shows the sum '\$486,268.00' in column B. The bottom of the screen features a navigation bar with icons for a grid, a pencil, a gear, a magnifying glass, and a letter 'A'.

	A	B	C
1	Name	January-13	February-13
24			
25			
26	Katherine A.	\$140,345.00	\$104,890.00
27			
28			
29			
30			
31			
32			
33			
34		Total Sales for Q1	
35		\$486,268.00	
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			

Making a 3D Reference

3D references refer to the same cell or range on multiple sheets. You might think of a 3D reference as a way to 'tunnel' through multiple sheets to get the values in the same geographic spot (address or range) on the sheets. A 3-D reference is a great way to reference several worksheets that have the same cells on each worksheet containing data you'd like access to en masse. A great example of this type of information would be a summary page for a sales Workbook. Each sheet corresponds to a month of the year and in each cell address Z26 contains the total sales for that month. To summarize the sales you could use multiple sheet references but it's easier to use a 3D reference.

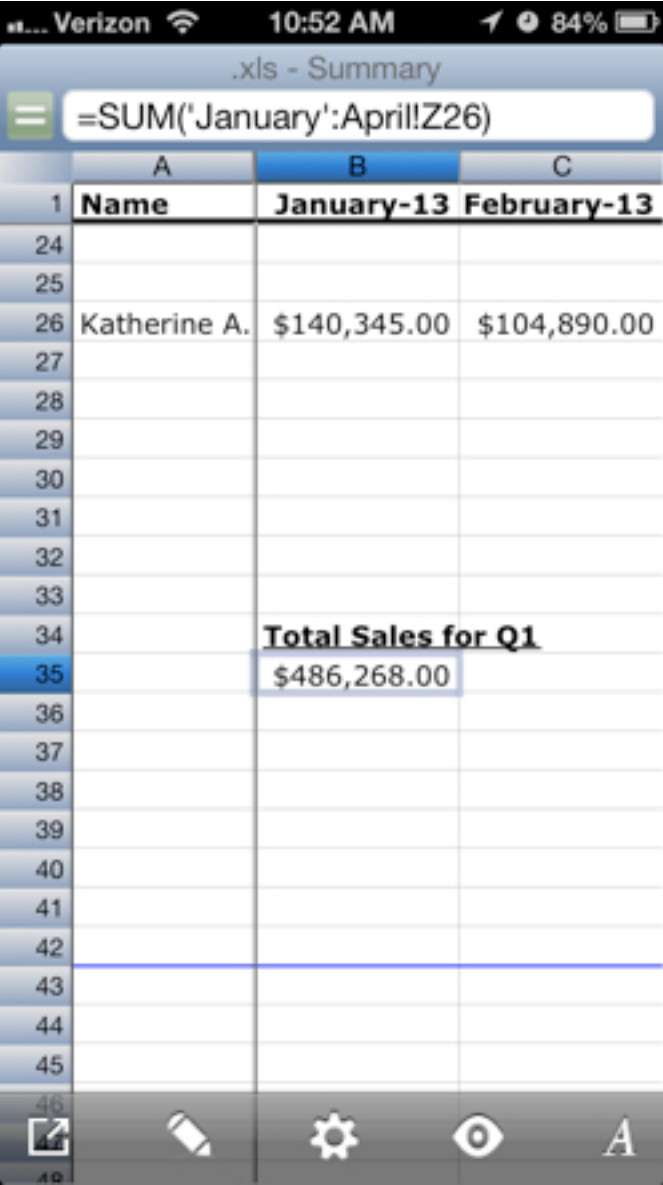
3D references can be used in conjunction with the following functions.

SUM, AVERAGE, COUNT, COUNTA, MAX, MIN, PRODUCT, STDEV, VAR.

Example Syntax:

=SUM(Sheet1:Sheet5!B2) - this would total Cell B2 on sheets 1-5.

=FUNCTION(SheetStart:SheetEnd!Cell)



The screenshot shows an Excel mobile app interface. At the top, the status bar displays 'Verizon', signal strength, '10:52 AM', and '84%' battery. Below the status bar, the title bar reads '.xls - Summary'. The formula bar shows the formula '=SUM('January':April!Z26)'. The main area displays a table with three columns: 'Name', 'January-13', and 'February-13'. The table has rows for data entry, with row 26 containing 'Katherine A.', '\$140,345.00', and '\$104,890.00'. Row 34 is labeled 'Total Sales for Q1' and row 35 shows the total value '\$486,268.00'. The bottom of the screen features a navigation bar with icons for a grid, a pencil, a gear, a magnifying glass, and a letter 'A'.

	A	B	C
1	Name	January-13	February-13
24			
25			
26	Katherine A.	\$140,345.00	\$104,890.00
27			
28			
29			
30			
31			
32			
33			
34		Total Sales for Q1	
35		\$486,268.00	
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			

Formatting Cells

Calc XLS allows you to format cells many different ways. Formatting only applies to the display of the data in a cell. The values themselves are not changed. Here are some formats:

In This Chapter:

Choosing a Number Format

Choosing a Cell Format

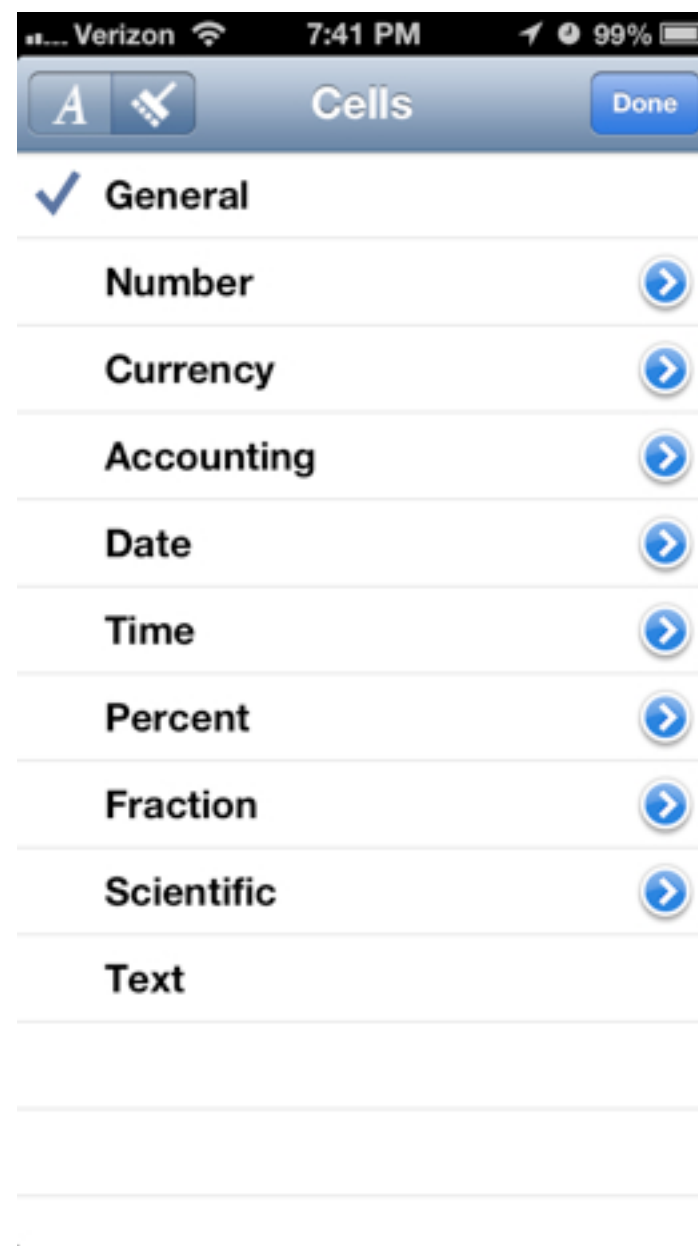
Format	Example	Formatting Code
General	1234	<i>na</i>
Number	1234.00	<i>na</i>
Currency	\$123.45	<i>\$#,##0.00_);(\$#,##0.00)</i>
Accounting	123.45	<i>_(\$* #,##0.00_);_(\$* (#,##0.00);_(\$*="??_);_(@_)</i>
Date	08/11/2015	<i>dd/mm/yyyy</i>
Time	2:30:44 PM	<i>h:mm:ss AM/PM</i>
Percent	65.00%	<i>na</i>
Fraction	1/2	<i># ?/?</i>
Scientific	1.10E+05	<i>na</i>
Text	=SUM(E8:E13)	<i>na</i>

Choosing a Number Format

A number format changes how your number is displayed. Please note that internally the data is stored in the same format, however, the number is displayed differently.

Examples of Formatting:

Format	Input	Result
General	234.3	234.3
Number	234.3	234.3
Currency	234.3	\$234.30
Accounting	234.3	\$234.30
Date	324.3	8/22/1904
Time	324.3	7:12:00 AM
Percent	324.3	23430.00%
Fraction	324.3	234 1/3
Scientific	324.3	2.34E+02
Text	+0324-24-4578	+0324-24-4578



Choosing a Text or Cell Format

Cells and their content can be formatted in many different ways. Here are some of the options:

Style:

Bold, *Italic*, Underline, ~~Strikethrough~~

Alignment:

Justified, Left, Center, Right Top, Middle, Bottom

Font (choice of many fontfaces)

Size

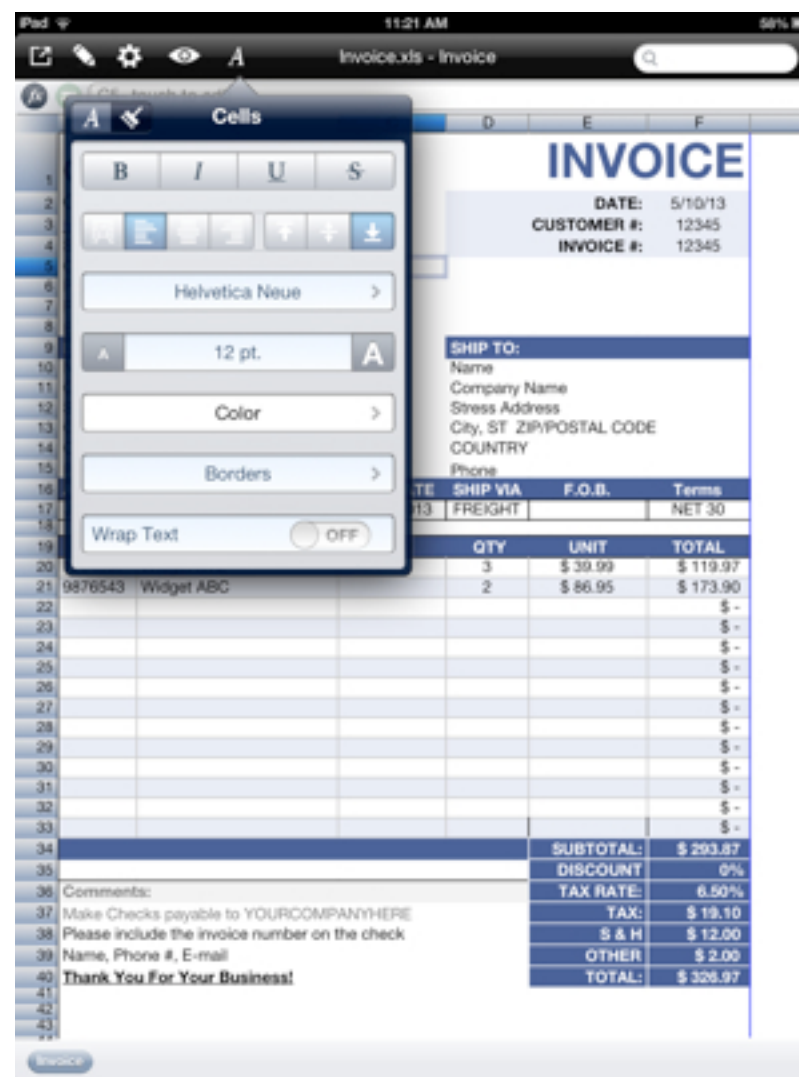
Color: Cell text color, cell background color

Borders

Wrap Text - On/Off

Merge Cells - On/Off

Note: Merged cells are a formatting option.



Using Functions in Formulas

Functions in Calc XLS are pre-built formulas designed to save the user of the program time and effort. Calc XLS has over 200 functions covering a wide variety of analytical tools. These functions cover Mathematical, Trigonometric, Financial, Date and Time, Logical, Worksheet, Statistical, and Text calculations.

Functions in this guide are listed as they appear in the application's Functions toolbar item. Each function is listed and the format explained and some examples given. Some Functions have accompanying pictures and/or notes. The following is the basic format used within this guide:

FUNCTION (this is the name of the function)

Purpose: Explains what the function returns and/or what is the function's purpose..

Format: =FUNCTION(required thing 1, required parameter 2, [optional parameter])

All functions start with an equals (=) sign followed by the function name. After the function name, parameters go within a pair of parenthesis () . Most parameters are required but some are optional. Optional parameters are listed within a pair of brackets [].

Examples:

A description of some examples and the results they produce goes here.

Notes:

The last section of information provided are examples of the functions with specific variables so the user can see and interpret what kinds of results to expect from using that function.

In This Chapter:

Values & Operators

Entering a Formula

Entering a Formula Pt. II

Values and Operators

Numbers - positive or negative numbers, decimals, etc..

Text - enclosed within double quotes ("text")

Operators - short-hand mathematical notation used with formulas (See the list below)

Cell or range preferences - ie., A1 or B1:E5

Functions - ie., =PI or =SUM(23-11)

Note: In building formulas it is advised that separate operations be enclosed with parenthesis as this makes it easier to read now, and to audit later.

Display Errors

in a cell means you need to increase the column width to accommodate the cell contents.

#REF error means there is an error in a referenced cell

#DIV/0! error means that the formula is being divided by 0 and therefore is an illegal operation

operator	meaning
+ (Plus)	add
- (Minus)	subtract
* (Asterisk)	multiply
/ (Forward Slash)	divide
^ (Caret)	exponent
% (Percent)	percent
= (Equals)	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
<>	Not equal to
& (Ampersand)	Joins two values
: (Colon)	Range indicator
, (Comma)	argument separator
(Single space)	Intersect operator

Order of Operations

Arguments in formulas are evaluated in the following order left to right

Operator	Description
() (parentheses)	parentheses
:	denotes reference
,	argument separator
(single space)	intersect operator
- (minus sign)	negative sign
% (percent sign)	percent
^ (caret)	exponent
*	multiplication
/ (forward slash)	division
+ (plus sign)	addition
- (minus sign)	subtraction
& (ampersand)	connects strings
= (equals sign)	equal to
>	greater than
<	less than
>=	greater than or equal to
<=	less than or equal to
<>	not equal to

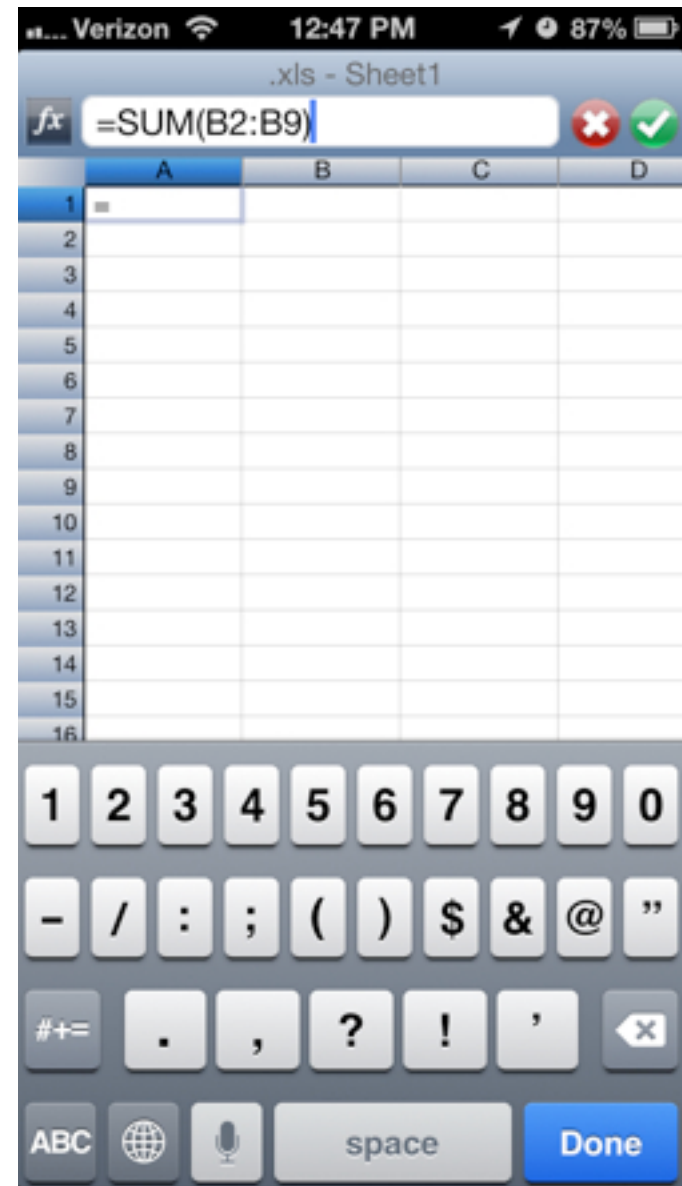
Entering a Formula

The power of a spreadsheet lies in its functions. There are several methods to enter formulas.

- 1 Select the cell in which the function is to be entered by tapping on the cell
- 2 Tap on the text entry area in the formula bar.
The keyboard appears.
- 3 Tap the "=" sign and then the name of the function in CAPITAL letters followed with a left parenthesis "(" and then the variables are required for the function, and end with a right parenthesis ")".

Hint: Remember to always enclose your functions with equal amounts of left and right parentheses.

- 2 Tap the *Done* button on the keyboard, the keyboard will slide away and the spreadsheet will perform the calculation, move to select the next cell and update the results of the calculation.



Entering a Formula Pt II

1 Tap on the cell in which the function is to be entered.

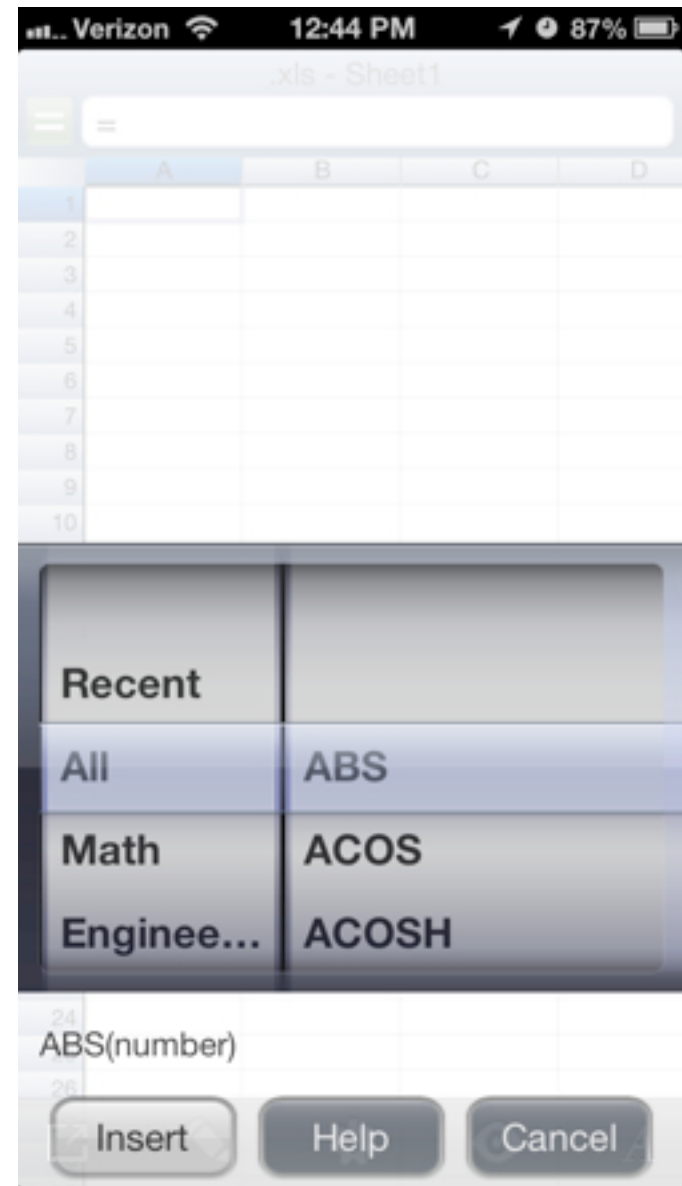
2 Tap on the "Equals" (=) button in the formula bar.

1 Tap on "Functions" button in the in the formula bar.

A menu of functions appears. From the menu select the function you'd like to enter.

3 Tap the desired function to choose it.

4 Tap in the Cell Editor window. Type in the desired variables following the indicated function format and then tap the Done key. The calculation is performed and the results are displayed in the selected cell.



Using Constants

Constants in Calc XLS allow you to convert from standard units to other standard units. Knowing, and using the name of the constant will allow you to convert the units to a different set of units. For instance, Imperial to Metric.

Metric Prefixes	Weight
k = kilo	g = gram
d = deci	lbm = pound
e = dek	ozm = ounce
c = centi	t = metric ton
m = milli	ston = short ton
lton = long ton	gr = grain

Area	Temperature
m2 = sq meter	cel = Celsius
ha = (Japanese land measurement)	fah = Fahrenheit
in2 = sq inch	kel = Kelvin
ft2 = sq ft	
ac = acres ts = (Japanese unit of measure formats, mats determine house size)	
jou = (Japanese unit of measure ! to 1.65 sq meters)	
mi2 = sq miles	

In This Chapter:

Metric Prefixes

Weight

Area

Temperature

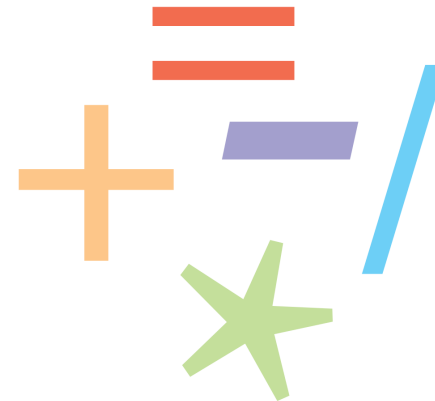
Volume

Length

Volume	Length
lt = liter	m = meter
m ³ = cubic meter	mi = mile
ozl = ounce	Nmi = nautical mile
cup = cup	in = inch
pt = pint	ft = foot
qt = quart	yd = yard
gal = gallon	
tsp = teaspoon	
tbs = tablespoon	
ft ³ = cubic ft	

Using Math Functions

Mathematical Functions perform general mathematical calculations. Basic math is the heart of a spreadsheet. While the more complicated functions are amazing the most used functions of spreadsheets are often simple math functions. All formulas begin with an equals sign.



ABS

Purpose: Calculates the absolute (positive) value of n.

The =ABS(n) function always calculates a positive value equal to the distance from 0 (zero) that n occupies on the number line.

The absolute (unsigned) value of n.

A positive value is a signed value; an absolute value is an unsigned value where the value is the distance of n from 0 (zero), in a graphing example.

Format: =ABS(number)

Examples:

=ABS (8) equals 8

=ABS (-8) equals 8

CEILING

Purpose: Rounds a positive number to the closest value that can be divided by a second number.

Format: =CEILING (number, significance)

Examples:

=CEILING (7,5) equals 10

=CEILING (6.21, .25) equals 6.25

The ceiling function rounds a number up so that the n value is always smaller than the result expressed in whole units of x.

COMBIN

Purpose: Calculates the number of possible combinations for a given number of items.

Format: =COMBIN (number, size)

number = the number of items in the complete set

size= the number of items in the smaller sub-set

Examples: =COMBIN (5,3) equals 10

CONVERT

Purpose: Calculates a value described in one measurement system for a different measurement system.

Format: =CONVERT(number, "Unit 1", "Unit 2")

Examples: =CONVERT(6,"m", "ft") equals 19.685

EVEN

Purpose: Rounds a value (positive or negative) n to the nearest larger even number.

Format: =EVEN(number)

Examples:

=EVEN(3.2) equals 4

=EVEN(4.2) equals 6

=EVEN(-2.1) equals -4

EXP

Purpose: Calculates the constant e (2.718282) raised to the nth power. (e is used as the base in natural logarithms.)

Format: =EXP(number)

Examples:

=EXP(n) equals e^n

=EXP (1.75) equals 5.754602676

=EXP (-1.75) equals 0.1737739435

The =EXP function is used in scientific calculations requiring exponential functions.

FACT

Purpose: Calculates the factorial of a positive number.

Format: =FACT(number)

Examples:

=FACT(n) equals $n!$

=FACT(7) equals $7*6*5*4*3*2*1 = 5,040$

FLOOR

Purpose: Rounds down a positive number to the closest positive value that can be divided by a second value.

Format: =FLOOR(number, significance)

Examples:

=FLOOR(7,3) equals 6

=FLOOR(17,2) equals 16

INT

Purpose: Rounds a value n down to the nearest integer.

Format: =INT(number)

Examples:

=INT (278.45) equals 278

=INT(-37.82) equals -37

LN

Purpose: Calculates the natural logarithm (base e [2.71828]) of a number.

Format: =LN(number), where n must be a positive value

Examples:

=LN(2) equals 0.69314718

LOG

Purpose: Calculates the logarithm of n using a specified base.

Format: =LOG(number,base)

Examples:

=LOG(7,3) equals 1.77124375

LOG10

Purpose: Calculates the common logarithm (base 10) of a value.

Format: =LOG10(number)

Examples:

=LOG10(3.7) equals 0.56820172

=LOG10(4) equals 0.60205999

MOD

Purpose: Calculates the remainder (Modulus) of the division x/y where y ! 0.

Format: =MOD(number, divisor)

Examples:

=MOD(17,3) equals 2

=MOD(36,6) equals 0

=MOD(-10,-3) equals -1

ODD

Purpose: Rounds a value n to the nearest odd integer moving away from 0.

Format: =ODD(number)

Examples:

=ODD(6) equals 7

=ODD(8) equals 9

POWER

Purpose: Calculates a number x raised to the nth Power.

Format: =POWER(number, power)

Examples:

=POWER(5,5) equals 3.125 ($5*5*5*5*5$) = 3,125

PRODUCT

Purpose: Calculates the product of the values used in the argument for this cell.

Format: =PRODUCT(number1,number2,number3...)

Examples:

=PRODUCT(4,4) equals 16

=PRODUCT(7,6,5,4,3,2,1) equals 5,040

Hint: You can use a Cell range instead of individual cell references. e.g.

=PRODUCT(A1:A2) equals 16 where A1 is 4 and A2 is 4

RAND

Purpose: Calculates a random integer between 0 and 1 each time the spreadsheet is recalculated.

Format: =RAND

Note: The value inside the parenthesis is left blank. You may momentarily see a "div/0 error" while the random value is being calculated.

Examples:

=RAND() equals 0.3

=RAND() equals 0.7

ROUND

Purpose: Rounds a value to a specified number of decimal places.

Format: =ROUND(number, decimals)

Examples:

=ROUND(3.141572,2) equals 3.14

=ROUND(7.437347,5) equals 7.43735

(The value n is rounded to x digits)

ROUNDDOWN

Purpose: Rounds a value down towards 0 at a specified number of decimals.

Format: =ROUNDDOWN(number, decimals)

Examples:

=ROUNDDOWN(4.7536,3) equals 4.753

ROUNDUP

Purpose: Rounds a value up away from 0 at a specified number of decimals.

Format: =ROUNDUP(number, decimals)

Examples:

=ROUNDUP(4.7536, 3) equals 4.754

SIGN

Purpose: The sign function yields 1 if n is positive, and 0 if n = 0, and -1 if n is a negative value.

Format: =SIGN(number)

Examples:

=SIGN(30) equals 1
=SIGN(-30) equals -1
=SIGN(0) equals 0

SUM

Purpose: Calculates the sum of the values used in the argument for this cell.

Format: =SUM(number1,number2,number3...)

Examples:

=SUM(C7:C17) equals 122 Where C7 --> C17 equals
2,4,6,8,10,13,14,15,16,17,17

SUMIF

Purpose: Calculates the sum of a set of numbers, but includes only numbers that pass a condition specified by the "if" part of the argument. The if condition can be performed on a number in the formula or on a referenced value or range.

Format: =SUMIF(test-range, "condition", [sum-range])

Examples:

=SUMIF(A1:A10, "<5") equals 10.
=SUMIF(A1:A10, "<5", B1:B8) equals 100.
=SUMIF(D1:F3, "=c", D5:F7) equals 27.
=SUMIF(B1:D1, 1) or SUMIF(B1:D1, SUM(1)) both total all the occurrences of 1 in the range.

SUMSQ

Purpose: Calculates the sum of the squares of the values in the argument.

Format: =SUMSQ(number1,number2,number3...)

Examples:

=SUMSQ(B2:B8) equals 203 where B2 --> B8 = 8,7,6,5,4,3,2
(8²+7²+6²+5²+4²+3²+2²) = 203 (64+49+36+25+16+9+4) = 203

SQRT

Purpose: Calculates the positive square root of a specified value.

Format: =SQRT(number)

Examples:

=SQRT(25) equals 5

=SQRT(17) equals 4.12310563

TRUNC

Purpose: Truncates a number to a value consistent with the number of decimals specified.

Format: =TRUNC(number, decimals)

Examples:

=TRUNC(3.14159265358979323,7) equals 3.1415926

=TRUNC(3.14159265358979323,10) equals 3.1415926535

Using Engineering Functions

Engineering functions generally convert one type of number representation to another. decimal, hexadecimal, binary, and octal are the main systems. One can also convert from certain units to other units. like miles to kilometers, ounces to grams, etc. You don't need to be an engineer to use many of these functions.

Hexadecimal	Binary	Decimal
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
A	1010	10
B	1011	11
C	1100	12
D	1101	13
E	1110	14
F	1111	15

BIN2DEC

Purpose: Converts a binary number to a decimal.

Format: =BIN2DEC(number).

Examples:

=BIN2DEC(1010) equals 10

=BIN2DEC(1111) equals 15

BIN2HEX

Purpose: Converts a binary number to a hexadecimal number.

Format: =BIN2HEX(number)

Examples:

=BIN2HEX(1010) equals A

=BIN2HEX(1111) equals F

BIN2OCT

Purpose: Converts a binary number to an octal number.

Format: =BIN2OCT(number,places) The places is optional, if it's omitted then the minimum number of characters is used.

Examples:

=BIN2OCT(1010) equals

=BIN2OCT(-.45) equals 2.03756167

CONVERT

Purpose: Converts a number from one measurement system to another.

Format: =CONVERT(number,"from","to")

Examples:

=CONVERT(28.3,"g","ozm") equals 0.998253408

=CONVERT(1,"km","mi") equals 1.609344

DEC2BIN

Purpose: Returns a binary representation of the hexadecimal number.

Format: =DEC2BIN(number,places) Place is an optional field, specifying to zero pad to that number of spaces.

Examples:

=DEC2BIN (42) equals 101010
=DEC2BIN(69,8) equals 01000101

DEC2HEX

Purpose: Returns a hexadecimal representation of the hexadecimal number.

Format: =DEC2HEX(number,places) Places is an optional field, specifying to zero pad to that number of spaces.

Examples:

=DEC2HEX(42) equals 2A
=DEC2HEX(69,3) equals 045

DEC2OCT

Purpose: Returns an octal representation of the hexadecimal number.

Format: =DEC2OCT(number,places) Places is an optional field, specifying to zero pad to that number of spaces.

Examples:

=DEC2OCT (42) equals 521
=DEC2OCT(69,3) equals 105

DELTA

Purpose: Tests two numbers for equality and returns 1 (True) if the numbers are equal and 0 (false) otherwise.

Format: =DELTA(number,number)

Examples:

=DELTA(7,14) equals 0
=DELTA(3.14,3.14) equals 1

GESTEP

Purpose: Returns 1 if the number is \geq step, otherwise returns 0. If you omit a value for step, zero is used.

Format: =GESTEP(number,step)

Examples:

=GESTEP (14,7) equals 1
=GESTEP(12,A2) where A2 is 13 equals 0

HEX2BIN

Purpose: Returns the binary representation of the hexadecimal number. Places is an optional field, specifying to zero pad to that number of spaces.

Format: =HEX2BIN(number,places)

Examples:

=HEX2BIN(7) equals 111
=HEX2BIN(3.14) equals 11

HEX2DEC

Purpose: Returns a decimal representation of the hexadecimal number.

Format: =HEX2DEC(number)

Examples:

=HEX2DEC () equals 1.19178731
=ACOS(-.45) equals 2.03756167

HEX2OCT

Purpose: Returns an octal representation of the hexadecimal number. Places is an optional field, specifying to zero pad to that number of spaces.

Format: =DEC2OCT(number,places)

Format: =HEX2OCT(number,places)

Examples:

=HEX2OCT(69) equals 151
=HEX2OCT(3.14,3) equals 003

OCT2BIN

Purpose: Returns a binary representation of the octal number. Places is an optional field, specifying to zero pad to that number of spaces.

Format: =OCT2BIN(number,places)

Examples:

=OCT2BIN (1024) equals 1000010100
=OCT2BIN(64,8) equals 00110100 (padded by 2 zeros)

OCT2DEC

Purpose: Returns a decimal representation of the octal number.

Format: =OCT2DEC(number)

Examples:

=OCT2DEC(11) equals 9

OCT2HEX

Purpose: Returns a hexadecimal representation of the octal number. Places is an optional field, specifying to zero pad to that number of spaces.

Format: =OCT2HEX(number,places)

Examples:

=OCT2HEX (1024) equals 214

=OCT2HEX(777,6) equals 0001FF (padded by 3 zeros)

Using Financial Functions

Financial Functions allow the substitution of abbreviations for complex formulas to calculate depreciation, cash flow, and loan values.



ANNUITY

Purpose: Calculates the present and future value of annuities.

Format: =ANNUITY(rate, periods)

Examples:

=ANNUITY(.079,15) equals 8.6119915806
=ANNUITY(interest rate, number of periods)

COMPOUND

Purpose: Calculates the compound interest earned at a given interest rate and period.

Format: =COMPOUND(rate,periods)

Examples:

=COMPOUND(.079,15) equals 3.1283956277
=COMPOUND(interest rate, number of periods)

DB

Purpose: Calculates the depreciation allowance of an asset using the Declining Balance method.

Format: =DB(cost, salvage, life, period, month)

Examples:

=DB(10000,3000,7,2,12) equals 1330.36
=DB(cost of asset, salvage value, life of asset, elapsed time)

DBB

Purpose: Calculates the depreciation allowance of an asset using the Double- Declining Balance method.

Format: =DBB(cost, salvage, life, period, factor)

Examples:

=DDB(7000,1000,5,3,2) equals 1,008
=DDB(original cost, salvage value, life of the asset in years, years elapsed)

FV

Purpose: Calculates the Future Value of a series of equal payments for a given period and interest rate.

Format: =FV(rate, periods, payment)

Examples:

=FV(.00625180,-700) equals 231,778.59

Where the following is true, an interest rate of 7.5% annually (.00625 monthly, payment amount of \$700, and the term of the loan is 180 months.

=FV(interest rate, payment amount, term of the loan)

IRR

Purpose: Calculates the Internal Rate of Return for an investment after a given period of time.

Format: =IRR(flows, guess)

Examples:

=IRR(C3:C13, 0.1) equals 0.0984340826 Where C3 --> C13 is -300,000; 20,000; 40,000; 50,000; 60,000; 70,000; 70,000; 70,000; 60,000; 50,000.

=IRR(range, guess)

NPV

Purpose: Calculates the Net Present Value of a series of future cash flows.

Format: =NPV(rate, flows)

Examples:

=NPV(0.083, C3:C13) equals 55,665.35 Where C3 --> C13 is -200,000; 10,000; 15,000; 20,000; 35,000; 40,000; 45,000; 50,000; 60,000; 85,000; 90,000

[=NPV(interest rate, range)]

PMT

Purpose: Calculates the Payment to retire a loan at a given term, interest rate, and principal amount.

Format: =PMT(rate, periods, pv)

Examples:

=PMT(.085, 17, -36000) equals 4,079.23

The loan amount is a negative number to be offset by a positive cash flow back to the maker of the loan.

=PMT(interest rate, term of the loan, loan amount)

PV

Purpose: Present Value calculates the value today of a series of equal future payments for a certain period at a given interest rate.

Format: =PV(rate, period, payment)

Examples:

=PV(.085/12, (17*12), 650) equals -70,021.06 [=PV(interest rate, loan payment, term of the loan)]

SLN

Purpose: Calculates the Straight Line depreciation of an asset with a certain purchase price, salvage value, and useful life.

Format: =SLN(cost, salvage, life)

Examples:

=SLN(8000,2000,5) equals 1,200

=SLN(cost of the asset, salvage value, life of the asset in years)

SYD

Purpose: Calculates the Sum-of-the-Years'-Digits depreciation of an asset with a certain purchase price, salvage value, and useful life.

Format: =SYD(cost, salvage, life, period)

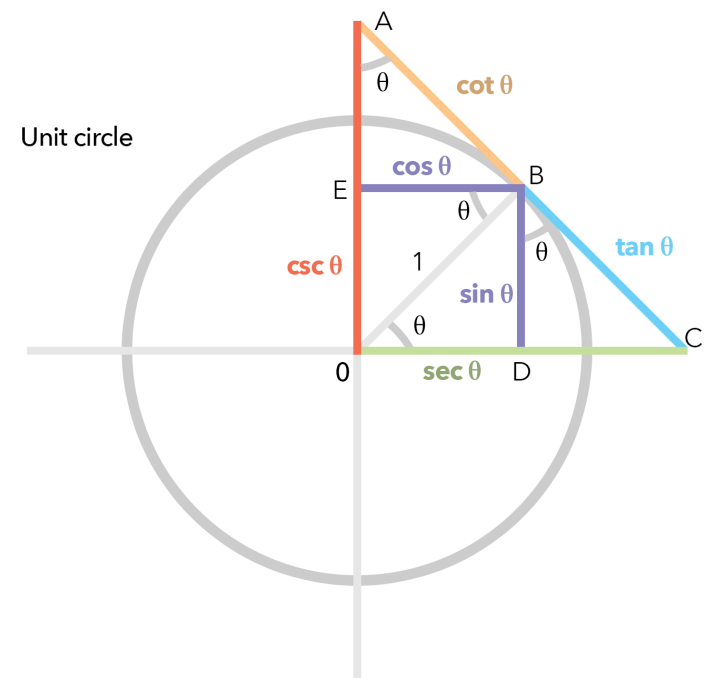
Examples:

=SYD(30000,7000,6,3) equals 4,380.95

=SYD(cost of the asset, salvage value, life of the asset in years, elapsed time)

Using Trig Functions

Trigonometry is the study of triangles and the relationships between the lengths of their sides and the angles. It's an offshoot of geometry that began around the third century BC. Trigonometry can be used in virtually every field. Trigonometric Functions calculate values for the standard trigonometric functions.



ACOS

Purpose: Calculates the Arc Cosine of a value in radians.

Format: =ACOS(number) The value for the angle expressed in radians is a number between -1 and 1.

Examples:

=ACOS (.37) equals 1.19178731
=ACOS(-.45) equals 2.03756167

ACOSH

Purpose: Calculates the angle in radians for the Hyperbolic Arc Cosine with the value specified in the argument.

Format: =ACOSH(number)

Examples:

=ACOSH(7) equals 2.63391579
=ACOSH(2.14) equals 1.39425834

ASIN

Purpose: Calculates the Arc Sine of a value in radians. The value for the angle expressed in radians is a number between -1 and 1.

Format: =ASIN(number)

Examples:

=ASIN(-.7) equals -0.77539750
=ASIN(.32) equals 0.32572949

ASINH

Purpose: Calculates the angle in radians for the Hyperbolic Arc Sine with the value specified in the argument.

Format: =ASINH (number)

Examples:

=ASINH(-32) equals -4.15912713
=ASINH(17) equals 3.52722446

ATAN

Purpose: Calculates the Arc Tangent of an angle expressed in radians. The value for the angle expressed in radians is a number between -1 and 1.

Format: =ATAN(number)

Examples:

=ATAN(3) equals 1.24904577

=ATAN(-3) equals -1.24904577 The resulting value is ! "-" and #
".

ATAN2

Purpose: Returns the Arc Tangent of the specified x and y coordinates. The angle, expressed in radians, is between ! and -!.

Format: =ATAN2(x,y)

Examples:

=ATAN2(1.2,1.9) equals 1.0075

=ATAN2(1.2,-1.9) equals -1.0075

ATANH

Purpose: Calculates the angle in radians for the Hyperbolic Arc Tangent with the value specified in the argument.

The number value is between -1 and 1.

Format: =ATANH(number)

Examples:

=ATANH(-.99) equals -2.64665241

=ATANH (-.37) equals -0.3884231

=ATANH(.45) equals 0.48470028 The value n is >-1 and < 1.

COS

Purpose: Calculates the Cosine of an angle expressed in radians. The number in the function is the angle expressed in radians

Format: =COS(number)

Examples:

=COS(2.3) equals -0.666276021

=COS(-.23) equals 0.973666395

COSH

Purpose: Calculates the angle in radians for the Hyperbolic Cosine with the value specified in the argument.

Format: =COSH(number)

Examples:

=COSH(3) equals 10.067661996

=COSH(.37) equals 1.0692344727

DEGREES

Purpose: Converts an angle expressed in radians to an angle expressed in degrees.

The number in the function is the angle expressed in radians

Format: =DEGREES(number)

Examples:

=DEGREES(6.28) equals 359.81749534

=DEGREES(3.14159265) equals 179.99999979

=DEGREES(1.75) equals 100.26761415

PI

Purpose: Returns the value ! (3.1415926535898).

Format: =PI

Examples:

=PI equals 3.1415926536

RADIANS

Purpose: Converts an angle expressed in degrees to an angle expressed in radians.

Format: =RADIANS(number)

Examples:

=RADIANS(45) equals 0.7853981634

=RADIANS(180) equals 3.1415926536

SIN

Purpose: Calculates the Sine of an angle expressed in radians. The number in the function is the angle expressed in radians

Format: =SIN(number)

Examples:

=SIN(4) equals -0.756802495

=SIN(.7) equals 0.6442176872

SINH

Purpose: Calculates the angle in radians for the Hyperbolic Sine with the value specified in the argument.

Format: =SINH(number)

Examples:

=SINH(.3) equals 0.3045202934

=SINH(5) equals 74.203210578

TAN

Purpose: Calculates the Tangent of an angle expressed in radians.

Format: =TAN(number)

Examples:

=TAN(.3) equals 0.3093362496

=TAN(.9) equals 1.2601582176

TANH

Purpose: Calculates the angle in radians for the Hyperbolic Tangent with the value specified in the argument.

Format: =TANH(number)

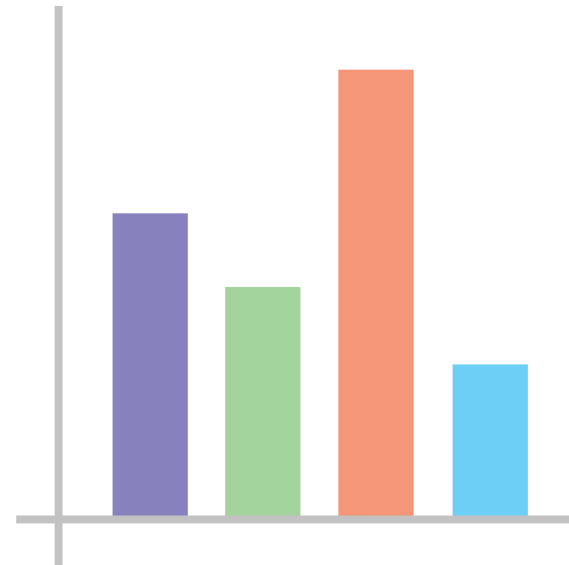
Examples:

=TANH(-.4) equals -0.379948962

=TANH(.4) equals 0.3799489623

Using Stat Functions

Statistical Functions is a branch of mathematics that deals with the collection, organization and analysis of data. Statistics is helpful to determine the average, count, median, or even the standard deviation. Knowing how to use the statistic functions can help you convey important information about a set of data. For instance, you have a dataset of weights for a product part you use to assemble a widget that your company sells. You can easily get the variance and median of those weights so that you can talk with your supplier about manufacturing quality issues.



AVEDEV

Purpose: Calculates the average of the absolute deviations of a data set from their mean.

Format: =AVEDEV(*number1, number2, number3...*) or =AVEDEV(*range*)

number1, number2, number3 are numeric values - they can be numbers, named ranges, or references to numbers.

Examples:

	A	B	C	D	E	F	G
1	4	5	6	7	5	4	3

=AVEDEV(1,4,7) equals 2

=AVEDEV(A1,G1) equals 1.020408163

=AVEDEV(D1:G1) equals 1.25

AVERAGE

Purpose: Calculates the numerical average (arithmetic mean) of a list of values.

Format: =AVERAGE(*number1, number2, number3...*) or =AVERAGE(*range*)

number1, number2, number3 are numeric values - they can be numbers, named ranges, or references to numbers.

Examples:

=AVERAGE(C2:C11) equals 16.6

=AVERAGE(C2,C3) equals 29.5

=AVERAGE(C2:C11) equals 25

BETADIST

Purpose: Returns the cumulative beta distribution. A is the optional lower bound of x and B is the optional upper bound of x.

Format: =BETADIST(*x, alpha, beta,[A],[B]...*)

number1, number2, number3 are numeric values - they can be numbers, named ranges, or references to numbers.

Examples:

	A	B	C	D	E	F	G
1	4	5	6	7	5	4	3

=BETADIST(2,8,10,1,3) equals 0.685470581

=BETADIST(A1,G1) equals 1.020408163

=BETADIST(D1:G1) equals 1.25

COUNT

Purpose: Counts the number of cells that contain numbers as well as arguments that contain numbers. Text is ignored.

Format: =COUNT(number1, number2, number3...) or
=COUNT(range)

Examples:

=COUNT(B2:D11) equals 30
=COUNT(B2:D11, 13) equals 31
=COUNT(B2:D11, 13,"Mariner Software") equals 31
=COUNT(B2:D11, 13,"Mariner Software","Calc",+2) equals 32

COUNTA

Purpose: Counts the number of cells that are not empty, meaning, they contain values. numeric values, error or text.

Format: =COUNTA(number1, number2, number3...) or
=COUNTA(list)

Examples:

=COUNTA(B2:D11) equals 30
=COUNTA(B2:D11, 13) equals 31
=COUNTA(B2:D11, 13, "Mariner Software") equals 32
=COUNTA(B2:D11, 13,"Mariner Software","Calc",+2) equals 34

COUNTIF

Purpose: Counts the number of cells that contain the search criteria specified.

Format: =COUNTIF(range, criteria)

range is the range of cells that you want to count based on the criteria.

criteria is used to determine which cells to count.

Using Named Ranges

You can also use a named range in the CountIf function. For example, a named range "family" that refers to column A in Sheet 1.

Examples:

=COUNTIF(B1:B23, 0.99) equals 2 - Uses a number as the criteria
=COUNTIF(A13:CA3,"Celery") equals 1 - Uses text as the criteria
=COUNTIF(C4:C19,">="&A1) - Uses an operator and a cell for the criteria
=COUNTIF(Prices, 0.99) equals 2 - Uses a named range
=SUM(COUNTIF(B22,">0"),COUNTIF(B135,">0")) equals 2 - Sums single cell ranges.
=COUNTIF(B17,">0")+COUNTIF(B13:B15,">0")+COUNTIF(F6:F13)) - Adds non-contiguous ranges.

GAMMALN

Purpose: Calculates the natural logarithm (base e) of the gamma function, !(n).

If n is text the function equals #VALUE! error value, if n " 0 the function equals #NUM! error

Format: =GAMMALN(number)

Examples:

=GAMMALN(3) equals 0.6931471806

MAX

Purpose: Returns the largest value in a list of values.

Format: =MAX(number1, number2, number3...)

Examples:

=MAX(C3:C18) equals 57 where C3 -->C18 is 2, 57, 16, 12, 14, 14, 13, 15,11,12,10,9,8,24,21,16 [=MAX(list)]

MEDIAN

Purpose: Returns the median value in a list of values.

Format: =MEDIAN(number1, number2, number3...)

Examples:

=MEDIAN(C3:C18) equals 13 where C3 -->C18 is 2, 57, 16, 12, 14, 14, 13, 15,11,12,10,9,8,24,21,16

=MEDIAN(list)

MIN

Purpose: Displays the smallest value in a list of values.

Format: =MIN(number1, number2, number3...)

Examples:

=MIN(C3:C18) equals 2 where C3 -->C18 is 2, 57, 16, 12, 14, 14, 13, 15,11,12,10,9,8,24,21,16 [=MIN(list)]

PERMUT

Purpose: Calculates the number of Permutations, or different arrangements, of a given list of objects.

Format: =PERMUT(number, number_chosen)

Examples:

=PERMUT(16,2) equals 240 A group of 16 people could make up 240 different 2 person work teams [=PERMUT(number in set, number in sub-set)]

RANK

Purpose: Calculates the Rank of a number in a list of numbers.

Format: =RANK(number, range, ascending)

Examples:

=RANK(13,C3:C18,1) equals 8 where C3 -->C18 is 2, 57, 16, 12, 14, 14, 13, 15,11,12,10,9,8,24,21,16

=VAR(B3:D12) equals 90.837931034483

=VAR(B3,C3,D3) equals 43

STDEV

Purpose: Returns the standard deviation of a population based on a sample of numbers in a range. Text is ignored.

Format: =STDEV(*number1, number2, number3...*) or =STDEV(*range*)

Examples:

=STDEV(B3:D12) equals 9.5308935066175

=STDEV(B3,B4) equals 4.9497474683058

=STDEV(B3,B4,B5) equals 6.0277137733417

VAR

Purpose: Returns the variance of the population base don a sample of numbers in a range.

Format: =VAR(*number1, number2, number3...*) or =VAR(*range*)

Examples:

Using Lookup Functions

Lookup functions are used to retrieve information based on a known value - a name a test score, etc., from worksheet cells and ranges. These kinds of functions can be helpful when you want to “look up” some info. (LOOKUP, HLOOKUP, VLOOKUP). For example, test scores and you wish to find the person who had the top score, you could use a lookup and return that person’s name. Many use Lookup functions as they would use a database of sorts. When you need a certain value from a table of info Lookup functions are some of the best ways of getting it programmatically.



ADDRESS

Purpose: Creates a cell address as text given a specific column and row.

Format:

=ADDRESS(row_num,column_num,abs_num,A1,sheet_text)

Condition 1 or omitted Absolute column; absolute row

Condition 2 Relative column; absolute row

Condition 3 Absolute column; relative row

Condition 4 Relative column; relative row

Examples:

=ADDRESS(1,1,1) equals \$A\$1

=ADDRESS(1,1,2) equals A\$1

=ADDRESS(1,1,3) equals \$A1

=ADDRESS(1,1,4) equals A1

[=ADDRESS(column, row, condition)]

AREAS

Purpose: Returns the number of areas in a set of references to single cells or ranges of cells.

Format: =AREAS(reference)

Examples:

=AREAS(A1) equals 1

=AREAS(A1:C9) equals 1

=AREAS(A1:C9,E4,E5:F6) equals 3

[=AREAS(cell or range of cells)]

CHOOSE

Purpose: Returns the nth value in an argument list. It may be numeric, text, a range reference or formulas.

Format: =CHOOSE(index, number 1, number 2, ...)

Examples:

=CHOOSE(2,"Accounting","Budget","Personnel","CEO") equals Budget

=CHOOSE(index number, value 1, value 2, ...value z)

COLUMN

Purpose: Returns the column number of a cell address (starts at column 0).

Format: =COLUMN(cell)

Examples:

=COLUMN(D3) equals 4 as column D is the 4th column over.

COLUMNS

Purpose: Returns the column number of a cell address (starts at column 0).

Format: =COLUMN(cell)

Examples:

=COLUMN(D3) equals 4 as column D is the 4th column over.

HLOOKUP

Purpose: Searches the top-most row of a range towards the right for a specified value. Returns the value in the same row based on an index number. If an exact match for the value isn't found, the next closest value that is less than the search value is used.

Format: =HLOOKUP(*lookupvalue*, *range*, *index*, [*not_exact_match*])

value is the value to search for in the first column of the *range*.

range is two or more columns of data that is sorted in ascending order.

index is the column number in *range* from which the value is returned. The first column is 1.

not_exact_match determines if you are looking for an exact match based on value. FALSE or 0 finds an exact match. TRUE or 1 finds an approximate match. If an exact match is not

found, the next largest value that is less than *lookupvalue* is used.

Examples:

=HLOOKUP("Celery",A28:K30,2) equals \$1.99 - the price of "Celery"

=HLOOKUP("2.99",A29:K30,2,false) equals the description of Oranges is an exact match from row 30

Note:

If *index* is less than 1, the VLookup function returns #VALUE!.

If *index* is greater than the number of columns in *range*, the HLOOKUP function returns #REF!.

If you enter FALSE for the *not_exact_match* parameter and no exact match is found, then the HLOOKUP function returns #N/A.

INDEX

Purpose: Returns the contents of a cell whose position is determined by the argument. The argument contains a range and two index values. The index is a position within the given range using rows and columns as coordinates.

Format: =INDEX(range, rowindex, columnindex)

Examples:

=INDEX(A1:C7,3,2) equals 40 where \$40 is the price of the water polo balls in row 3, column 2.

=INDEX(A1:C7,6,3) equals 8; the inventory level for tennis rackets in Row 6 column 3.

=INDEX(A1:C7,8,8) equals #REF - Column 8, Row 8 is outside the range A1:C7.

INDIRECT

Purpose: Returns the contents of a specified cell.

Format: =INDIRECT("cell reference")

Examples:

If A5 contains bird and D5 contains =A5 then:
=INDIRECT("D5") equals bird

If A3 contains cat and D3 contains A3 then:
=INDIRECT("D3") equals cat
=INDIRECT("R3C4",FALSE) equals "0" - this is an error, Calc doesn't support the Address style.
=INDIRECT(D3) equals #REF - no quotation marks found.

Notes:

INDIRECT must reference a single cell in the current spreadsheet, i.e. no references to cells in other layers, ranges, or external file references are allowed.

Excel & Numbers have a slightly different optional format that includes a style parameter. A translated sheet might contain an Indirect that looks like this:

=INDIRECT(cell reference, [address style])
Address Style either 1 or 0 or True or False.

True or 1 means that the regular address style of A3 is used. False or 0 means that the address style of R3C4 (Row, Column) is used.

Excel:

=INDIRECT("R3C4",False) would equal "cat" where R3C4 is Row 3, Column 4.

=INDIRECT("D6",True) would return "cat" where True means that the "regular" address style is used.

LOOKUP

Purpose: Looks in a single (sorted) row or column for a value and returns the corresponding value from the same position in a second row or column.

Format: =LOOKUP(lookupvalue, lookuprange, resultrange)

Notes:

The lookup range,row, or column must be sorted in ascending order.

If no exact match is found, the largest value in the lookup range that is less than or equal to the lookup value is used.

If the lookup value is smaller than all of the values in the lookup range, then the function returns #N/A.

If the values in the lookup range are not sorted in ascending order, the LOOKUP function returns the incorrect value.

Examples:

=LOOKUP("Bill",G2:G11,H2:H11) equals 92

=LOOKUP("Fred",G2:G11,H2:H11) equals "#N/A"

=LOOKUP(3,B1:B11,C1:C11) equals green
=LOOKUP(4.6,B1:B11,C1:C11) equals yellow
=LOOKUP(0,B1:B11,C1:C11) equals #N/A

MATCH

Purpose: Searches for a value in a range and returns the relative position of that item.

Format: =MATCH(value,range,[match_type])

Match_type is either -1, 0, or 1.

1 - finds the largest value that is less than or equal to look-up_value. The range must be sorted in ascending order: ...-2, -1, 0, 1, 2, ..., A-Z, FALSE, TRUE.

0 - finds the first value that is exactly equal to looked-up value. The range can be in any order.

-1 - finds the smallest value that is greater than or equal to looked-up value. The range must be sorted in descending order.

If match_type is omitted, it is assumed to be 1.

Examples:

	A	B
1	Pet	Count
2	Dog	25
3	Cat	38
4	Fish	40
5	Snake	41

=MATCH(39,B2:B5,1) equals 2

Because there is no exact match, the position of the next lowest value (38) in the range B2:B5 is 2.

=MATCH(41,B2:B5,0) equals 4

The position of 41 in the range B2:B5 is 4.

=MATCH(40,B2:B5,-1) equals error

The range B2:B5 is not in descending order (#N/A).

OFFSET

Purpose: Returns a reference to a range of cells that is a specific number of rows and columns from a cell or range of cells.

Format: =OFFSET(reference, rows, cols, height, width)

Examples:

=OFFSET(A1:D11, 3,2,4,4,) equals 16

=OFFSET(A1:D11,1,1,1,1) equals 15

=OFFSET(A1:D11, 2,2,1,1) equals 57

=OFFSET(A1:D11,0,0,1,1) equals "Employee"

ROW

Purpose: Returns the row number of a cell address.

Format: =ROW(cell)

Examples:

=ROW(C9) equals 9

ROWS

Purpose: Counts the number of rows in a range.

Format: =ROWS(range)

Examples:

=ROWS(A1:F18) equals 18

VLOOKUP

Purpose: Searches the left-most column of a range downward for a specified value. Returns the value in the same row based on an index number. If an exact match for the value isn't found, the next closest value that is less than the search value is used.

Format: =VLOOKUP(*lookupvalue*, *range*, *index*, [*not_exact_match*])

value is the value to search for in the first column of the *range*.

range is two or more columns of data that is sorted in ascending order.

index is the column number in *range* from which the value is returned. The first column is 1.

not_exact_match determines if you are looking for an exact match based on value. FALSE or 0 finds an exact match. TRUE

or 1 finds an approximate match. If an exact match is not found, the next largest value that is less than *lookupvalue* is used.

Examples:

=VLOOKUP("Celery",A13:C23,2) equals \$1.99 - the price of "Celery"

=VLOOKUP("Celery",A13:C23,3) equals "As much a household staple as o..."

Notes: If *index* is less than 1, the VLookup function returns #VALUE!.

If *index* is greater than the number of columns in *range*, the VLookup function returns #REF!.

If you enter FALSE for the *not_exact_match* parameter and no exact match is found, then the VLookup function returns #N/A.

Using Logic Functions

Logic functions are used to determine if a test is true or false. So why is knowing if something is true or false helpful? Testing for true or false is helpful. For Instance, an IF function can be very powerful. Sometimes you may need to nest more than one IF function within a formula. You can also use AND, OR, and other logical operators to extend the power of the function. Here is an example of where a nested IF formula could be very helpful. See more examples on your device in the Templates folder.

	A	B	C	D	E	F	G
1	Student	Grade	Average	Test 1	Test 2	Test 3	Test 4
2	Student 1	D	67	56	64	70	78
3	Student 2	A	95.5	94	92	97	99
4	Student 3	C	73	78	82	71	61
5	Student 4	B	84	85	88	82	81
6	Student 5	C	78.5	76	77	72	89
7	Student 6	A	93.25	91	94	90	98
8							
9							
10	Grading Scale						
11	A	90	100				
12	B	80	89.9				
13	C	70	79.9				
14	D	60	69.9				

Teacher's gradebook - the letter grade in column B is based on a grading scale table and the student's numerical average in column C.

AND

Purpose: Displays 1 only if both conditions are true.

Format: =AND(number 1, number 2)

Examples:

=AND(TRUE, TRUE) equals 1
=AND(TRUE, FALSE) equals 0
=AND(2+2=4, 2+2=4) equals 1
=AND(2+2=4, 2+2=5) equals 0
=AND(condition 1, condition 2)

FALSE

Purpose: Returns a logical value 0 (false).

Format: =FALSE

Examples:

=FALSE equals 0 where the cell is formatted general.

IF

Purpose: Returns one value if the condition is true, and another value if the condition is false.

Format: =IF(value, true_value, false_value)

Examples:

=IF(7>3, "C3:C12", "D3:D12") equals C3:C12 because 7>3 (true)
=IF(7<3, "C3:C12", "D3:D12") equals D3:D12 because 7 is not <3, (false)

NOT

Purpose: Returns 1 (true), if the logical condition is false, or it returns 0 (false) if the logical condition is true.

Format: =NOT(value)

Examples:

=NOT(2+2=5) equals 1 (true)
=NOT(2+2=4) equals) (false)

OR

Purpose: Returns 1 (true), if any of the logical conditions are true, if not it returns 0 (false).

Format: =OR(number1, number2...)

Examples:

=OR(TRUE, FALSE, FALSE) equals 1 (true) =OR(FALSE, FALSE, FALSE) equals 0 (false) [=OR(condition A, condition B, condition C)]

TRUE

Purpose: Returns the logical value 1 (true).

Format: =TRUE

Examples:

=TRUE equals 1 where the cell is formatted general.

Using Date and Time Functions

The Time Functions let you convert dates and times to date and time numbers so that you can use them in worksheet calculations. The starting point in time used is 12:00 AM on January 1, 1904 which is considered to have the value 0. That value is called a date serial. All dates and times in a spreadsheet are stored as a date serial. Expressed in the converse, 0, formatted as a date, equals January 1, 1904. Dates and times have a shorthand method of entry for custom dates and times. dd/mm/yy hh:mm:ss. knowing these abbreviations can help you understanding formatting dates and times.

abbreviation	meaning
dd	21 (<i>2 digit day</i>)
yyyy	1984 (<i>4 digit year</i>)
mmm	dec
mmmm	december
mmmmm	D (<i>1st letter of month name</i>)
h:mm:ss AM/PM	hours:minutes:seconds ante meridiem / post meridiem

DATE

Purpose: Calculates the date number for a specified year, month, and day values.

Format: =DATE(year, month, day)

Examples:

=DATE(49, 3, 6) equals 16,501 Where 49,3,6 represents March 6, 1949 and the cell is formatted as general and not a time or date formatting.

DATEVALUE

Purpose: Converts text that looks like a date into its equivalent date number.

Format: =DATEVALUE(text)

Examples:

=DATEVALUE("3/6/49") equals 16,501

DAY

Purpose: Calculates the day of the month from a date number.

Format: =DAY(datenumber)

Examples:

=DAY(16501) equals 6

DAYS360

Purpose: Calculates the number of days between two date numbers, based on 360-day year.

Format: =DAYS360(start_date, end_date, method)

Examples:

=DAYS360("3/6/49", "3/6/99") equals 18,000 for 50 years of 360 days each. This function is limited to dates between January 1, 1904 and December 31, 1999. ????

HOURL

Purpose: Calculates the hour from a time number.

Format: =HOUR(datenumber)

Examples:

=HOUR(.3299) equals 7 (or 7 AM) on a 24 hour system. This means that the time value is somewhere between 7:00 AM and 7:59:59 AM. (Cell must be formatted as general.)

MINUTE

Purpose: Calculates the minutes from a time number.

Format: =MINUTE(datenumber)

Examples:

=MINUTE(.3299) equals 55.00 which means that it is 55 minutes past whichever hour is determined by the =HOUR function. (Cell must be formatted as general.)

MONTH

Purpose: Calculates the number of the month from a date number.

Format: =MONTH(datenumber)

Examples:

=MONTH(16501) equals 3 (March) Which means that 16,501 days after January 1, 1904 occurs in the 3rd month which is the month of March.

NOW

Purpose: Calculates the date and time number that corresponds to the current date and time.

Format: =NOW

Examples:

=NOW equals today's date

SECOND

Purpose: Calculates the seconds from a time number.

Format: =SECOND(datenumber)

Examples:

=SECOND(.3299) equals 3 or 7:55:03 AM Since as we saw above .3299 as a time value generated 7 AM with 55 minutes past the hour. (Cell must be formatted as general.)

TIME

Purpose: Calculates the time number for a specified hour, minutes, and seconds values.

Format: =TIME(hours, minutes, seconds)

Examples:

=TIME(14,30,15) equals 0.6043 for 2:30:15 PM

TIMEVALUE

Purpose: Converts text that looks like a time into its equivalent time number.

Format: =TIMEVALUE("text")

Examples:

=TIMEVALUE("18:35:15") equals 35,458.7745 where 35,458 is the date value for January 29, 2001 and .7745 is the time value for 2:35:15 PM the afternoon.

TODAY

Purpose: Calculates the date number that corresponds to the current date and time.

Format: =TODAY

Examples:

=TODAY equals today's date

WEEKDAY

Purpose: Calculates the day of the week for the value n.

Format: =WEEKDAY(datenumber)

Examples:

=WEEKDAY(35458) equals 2 Where 35,458 is the date value for January 29, 2001 and 2 is a Monday. Sunday = 1 and Saturday = 7.

YEAR

Purpose: Calculates the number of the year from a date number.

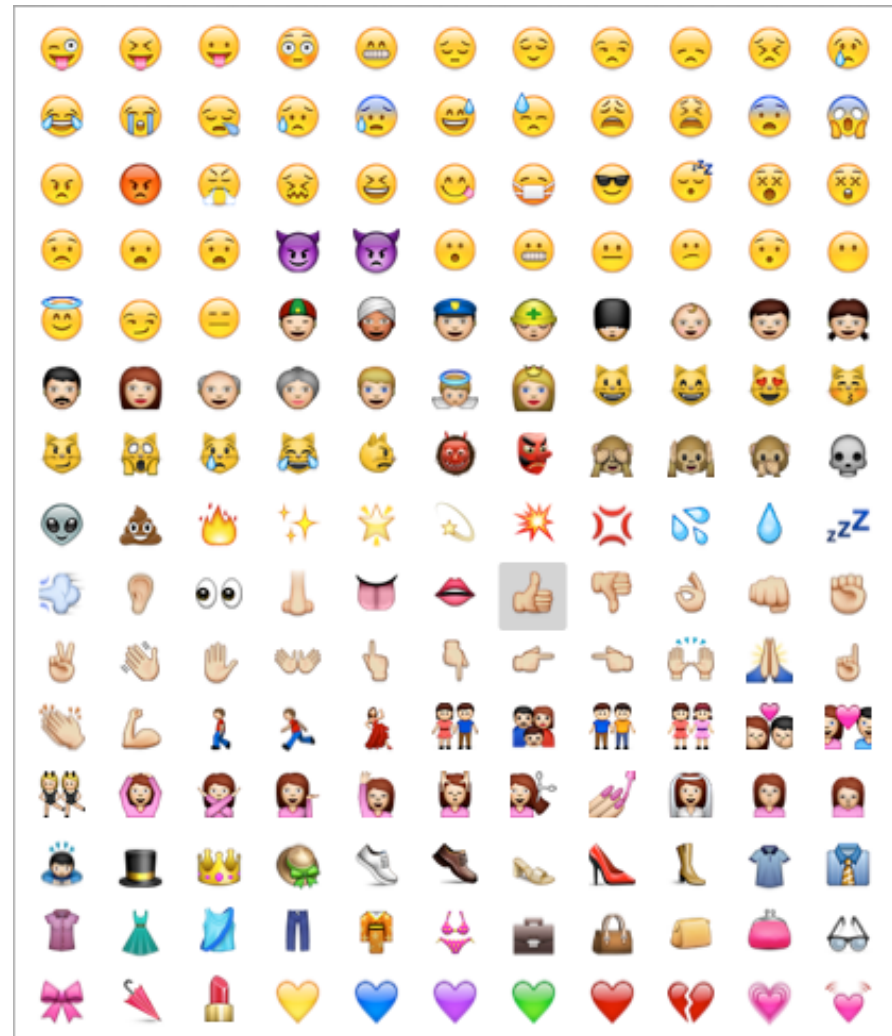
Format: =YEAR(datenumber)

Examples:

=YEAR(35458) equals 2001 (35,458 is the date value for January 29, 2001)

Text Functions

String Functions are used to find, compare, and alter text strings. You can often use text functions to find a certain string of text, concatenate a new string of text to the end or insert a word or phrase in the middle of a text range. You can switch a string from uppercase to lowercase, or get the ascii code for a single character.



CHAR

Purpose: Returns the Macintosh Character that corresponds to a specific number representing a specific ASCII value.

Format: =CHAR(number)

Examples:

=CHAR(78) equals "N" =CHAR(65) equals "A"

CLEAN

Purpose: Removes non-printing characters from a text string.

Format: =CLEAN("text")

Examples:

=CLEAN(A7) Where A7 contains some unprintable character contained in text imported from another operating system

CODE

Purpose: Returns the ASCII Code value, expressed as a number, for the first character in the specified text string.

Format: =CODE("text")

Examples:

=CODE(A12) equals 65 where A12 contains "Asher" and "A" has a value of 65

CONCATENATE

Purpose: Combines more than one text strings into a single text string.

Format: =CONCATENATE("text1", "text2")

Examples:

=CONCATENATE(C3,D4) equals "Jose lives in Ibiza" where C3 contains "Jose lives in" and D4 contains "Ibiza"

EXACT

Purpose: Returns 1 (true) if the two text strings are identical, and 0 (false) if they differ in any respect.

Format: =EXACT("text1", "text2")

Examples:

=EXACT("SEATTLE";"Seattle") equals 0
=EXACT("Seattle";"Seattle") equals 1

FIND

Purpose: Searches for a specific character, or series of characters within a specific text string.

Format: =FIND(find_text, text, start_char) 1 = 1st character in the text string

Examples:

=FIND("Popeye";"Olive Oil was Popeye's girlfriend",1) equals 15 Where the 15th character is the beginning letter of "Popeye"

FINDB

Purpose: Searches for a specific byte, or series of bytes within a specific text string.

Format: =FINDB(find_text, text, start_char) 1 = 1st byte in the byte string

Examples:

=FINDB("Popeye";"Olive Oil was Popeye's girlfriend",1) equals 22

FIXED

Purpose: Rounds a numeric value to a Fixed number of decimal places and formats the result as text.

Format: =FIXED(number, decimals)

Examples:

=FIXED(3.14159265,3) equals 3.142

LEFT

Purpose: Returns the leftmost characters of a text string to the nth character.

Format: =LEFT(text, count)

Examples:

=LEFT("Lucy",1) equals "L"
=LEFT("Lucy",3) equals "Luc"

LEFTB

Purpose: Returns the leftmost bytes of a byte string to the nth byte.

Format: =LEFTB(text, count)

Examples:

=LEFT("Lucy....",6) equals "Lucy.."

LEN

Purpose: Returns the total number of characters (including spaces) in the text string.

Format: =LEN(text)

Examples:

=LEN("Lucy was employee #thirty-five...") equals 33

LENB

Purpose: Returns the number of bytes in a text string.

Format: =LENB(text)

Examples:

=LENB(A3) equals 38 Where A3 contains "Lucy Hall was employee #thirty-five..."

LOWER

Purpose: Converts all the letters in a text string to lowercase.

Format: =LOWER(text)

Examples:

=LOWER("MARCH") equals "march"

MID

Purpose: Starting with the specified character in the text string returns the characters from there to the nth character.

Format: =MID(text, index, count)

Examples:

=MID("Remember the Source",14,6) equals "Source"
=MID(text string, specific character, n)

MIDB

Purpose: Returns a sub-string of text starting with the specified byte to the nth byte.

Format: =MIDB(text, index, count)

Examples:

=MIDB("Remember the Source",14,11) equals "....Source"
=MIDB(text string, specified byte, n)

PROPER

Purpose: Converts the first letter of each word in a text string to uppercase and the remaining letters to lowercase.

Format: =PROPER("text")

Examples:

=PROPER("march's top performer") equals "March's Top Performer"

REPLACE

Purpose: Replaces one text string with another text string starting and ending at specified character positions.

Format: =REPLACE("text", start, chars, replace_text)

Examples:

=REPLACE("January 2008",9,4,"2009") equals "January 2009"
=REPLACE(text string 1, starting character, n characters, text string 2)

REPLACEB

Purpose: Replaces one series of bytes with another series of bytes starting and ending at specified byte positions.

Format: =REPLACEB("text", start, bytes, replace_text)

Examples:

=REPLACE("King County Swim Center",13,4,"Aquatic") equals "King County Aquatic Center"
=REPLACEB(byte string 1, starting byte, n bytes, byte string 2)

REPT

Purpose: Repeats (Duplicates) the text string n number of times.

Format: =REPT(text, count)

Examples:

=REPT("Future Sales ",5) equals "Future Sales Future Sales Future Sales Future Sales Future Sales"

RIGHT

Purpose: Returns the rightmost characters starting at 1 to the nth character.

Format: =RIGHT(text, count)

Examples:

=RIGHT("James' Aquarium Sales",14) equals "Aquarium Sales"
=RIGHT(text string, n)

RIGHTB

Purpose: Returns a specified number of bytes in a byte string starting starting at 1 and going to the nth byte.

Format: =RIGHTB(text, count)

Examples:

=RIGHTB("Navy Blue Slacks",11) equals "Blue Slacks"
=RIGHTB(byte string, n)

SEARCH

Purpose: Searches for and returns the number of the character at which a specified character or text string is found, starting from the first character in the text string.

Format: =SEARCH(find_text, text, startposition)

Examples:

=SEARCH("hours","the number of overtime hours",1) equals 24

[=SEARCH(search text sub-string, text string to be searched, start position for search)]

SEARCHB

Purpose: Searches for and returns the number of the byte at which a specified byte is found, starting from the first byte in the text string.

Format: =SEARCHB(find_text, text, startposition)

Examples:

=SEARCHB("Juanita",".....Annual Budget for Juanita",1) equals 24
=SEARCHB(search byte sub-string, byte string to be searched, start position for search)

SUBSTITUTE

Purpose: Substitutes text A for text B in a text string.

Format: =SUBSTITUTE(text, old_text, new_text, instance_num)

Examples:

=SUBSTITUTE("Annual Report","Annual","Quarterly",1) equals "Quarterly Report"
=SUBSTITUTE(text, text to delete, replacement text)

T

Purpose: Returns the text referred to by a value. If value is not text, it returns " " (empty).

Format: =T(value)

Examples:

=T(A6) equals "Twenty Year Sales" where cell A6 contains "Twenty Year Sales"

Note: cell must be formatted to Currency/\$

TRIM

Purpose: Removes extra space characters from a text string (leading and trailing spaces between words in the text string).

Format: =TRIM(text)

Examples:

=TRIM(" Sales in the 1st Quarter ") equals "Sales in the 1st Quarter"

UPPER

Purpose: Converts all the letters in a text string to uppercase.

Format: =UPPER(text)

Examples:

=UPPER("miami, florida") equals "MIAMI, FLORIDA"

VALUE

Purpose: Returns a numeric value for text.

Format: =VALUE(text)

Examples:

=VALUE("\$25,000") equals \$25000

DOLLAR

Purpose: Converts a specific number to text in the Dollar currency format.

Format: =DOLLAR(number, digits)

Examples:

=DOLLAR(1000000,2) equals \$1,000,000.00

YEN

Purpose: Converts a specific number to text in the Yen currency format.

Format: =YEN(number, digits)

Examples:

=YEN(1000000,0) equals Y1,000,000

Info Functions

Information Functions are used to retrieve information from worksheet cells and ranges. You can tell whether the value in the cell is a number, the formatting applied to the cell, or if the cell is empty. These kinds of functions can tell you about the spreadsheet program and your current device.



CELL

Purpose: Returns information about the formatting, location, or contents of the upper-left cell in a reference. See the tables for the types and their returned values.

Format: =CELL(type,[reference])

Examples:

	A	B	C
1	Make	Model	Acquired
2	Audi	A7	12/11/2012
3	BMW	X1	02/23/2013

=CELL("row",A2) equals 2

=CELL("format",A2) equals G (General)

=CELL("contents",A3)

<i>type</i>	CELL returns
"address"	Reference of the first cell in reference, as text.
"col"	Column number of the cell in reference.
"color"	1 if the cell is formatted in color for negative values; otherwise returns 0 (zero).

<i>type</i>	CELL returns
"contents"	Value of the upper-left cell in reference; not a formula.
"filename"	Filename (including full path) of the file that contains reference, as text. Returns empty text ("") if the sheet that contains reference has not yet been saved.
"format"	Text value corresponding to the number format of the cell. The text values for the various formats are shown in the following table. Returns "-" at the end of the text value if the cell is formatted in color for negative values. Returns "()" at the end of the text value if the cell is formatted with parentheses for positive or all values.
"parentheses"	1 if the cell is formatted with parentheses for positive or all values; otherwise returns 0.
"prefix"	Text value corresponding to the "label prefix" of the cell. Returns single quotation mark (') if the cell contains left-aligned text, double quotation mark (") if the cell contains right-aligned text, caret (^) if the cell contains centered text, backslash (\) if the cell contains fill-aligned text, and empty text ("") if the cell contains anything else.
"protect"	0 if the cell is not locked, and 1 if the cell is locked.

type	CELL returns
"row"	Row number of the cell in reference.
"type"	Text value corresponding to the type of data in the cell. Returns "b" for blank if the cell is empty, "l" for label if the cell contains a text constant, and "v" for value if the cell contains anything else.
"width"	Column width of the cell rounded off to an integer. Each unit of column width is equal to the width of one character in the default font size.

format	CELL returns
General	"G"
0	"F0"
#,##0	,"0"
0.00	"F2"
#,##0.00	,"2"
\$#,##0_);(\$#,##0)	"C0"
\$#,##0_);[Red](\$#,##0)	"C0-"
\$#,##0.00_);(\$#,##0.00)	"C2"
\$#,##0.00_);[Red](\$#,##0.00)	"C2-"

format	CELL returns
0%	"P0"
0.00%	"P2"
0.00E+00	"S2"
# ??/? or # ??/??	"G"
m/d/yy or m/d/yy h:mm or mm/dd/yy	"D4"
d-mmm-yy or dd-mmm-yy	"D1"
d-mmm or dd-mmm	"D2"
mmm-yy	"D3"
mm/dd	"D5"
h:mm AM/PM	"D7"
h:mm:ss AM/PM	"D6"
h:mm	"D9"
h:mm:ss	"D8"

ERROR.TYPE

Purpose: Returns the numeric representation of the error or #N/A error if no error exists. Adding ERROR.TYPE to an IF function can be a nifty auditing method.

Format: =ERROR.TYPE(value)

Examples:

	A
1	Data
2	#NULL!
3	=1/0

=ERROR.TYPE(A2) equals 1

Number of the #NULL! error (1)

=IF(ERROR.TYPE(A3)<3,CHOOSE(ERROR.TYPE(A3),"Ranges don't intersect","Can't divide by zero"))

Sees if cell A3 contains either #NULL! or #DIV/0!, if it does, the error number is used in the CHOOSE function to display one of the messages; otherwise, the #N/A error value is returned. (Can't divide by zero.)

INFO

Purpose: Returns information about the current operating environment.

Format: =INFO("type_text")

Examples:

=INFO("osversion") equals iOS 6.1.3

=INFO("release") equals 4.0.0

type_text	Returns
"directory"	Path of the current directory or folder.
"memavail"	Amount of memory available, in bytes.
"memused"	Amount of memory being used for data, for Mac OS 9.x and earlier versions; returns "0" for Mac OS X and later versions.
"numfile"	Number of active sheets in the open workbooks.
"origin"	Absolute A1-style reference, as text, prefixed with "\$A:" for Lotus 1-2-3 release 3.x compatibility. Returns the cell reference of the top and leftmost cell visible in the window, based on the current scrolling position.
"osversion"	Current operating system version, as text.

type_text	Returns
"recalc"	Current recalculation mode; returns "Automatic" or "Manual".
"release"	Version of Calc XLS, as text.
"system"	Name of the operating environment: Macintosh = "mac" Windows = "pcdos" iOS = "iOS"
"totmem"	Total memory available, including memory already in use, in bytes.

ISBLANK

Purpose: Returns 1 (true) if a cell or range of cells are empty.

Format: =ISBLANK(value)

Examples:

=ISBLANK(C3) equals 1 (true) where cell C3 is blank
 =ISBLANK(C3:C14) equals 1 (true) where cells C3 --> C14 are blank
 =ISBLANK(C3) equals 0 (false) where cell C3 has data.
 =ISBLANK(cell address or range)

ISERR

Purpose: Returns 1 (true) for the value ERR, and 0 (false) for any other value.

Format: =ISERR(value)

Examples:

=ISERR(C2) equals 1 where the value in C2 is an ERR value
 =ISERR(C3) equals 0 where the text in C3 is "ERR" and it is not a value [=ISERR(cell address)]

ISERROR

Purpose: Returns 1 (true) if a cell or range of cells has any error value.

Format: =ISERROR(value)

Examples:

=ISERROR(D2) equals 1 where cell D2 contains "=0/0"
 =ISERROR(D2) equals 0 where cell D2 is blank [=ISERROR(cell address or range)]

ISEVEN

Purpose: Returns TRUE (1) if a cell is even, or FALSE (0) if the number is odd.

Format: =ISEVEN(value)

Examples:

=ISEVEN(A2) equals TRUE (1) where cell A2 contains "42"
=ISEVEN(69) equals FALSE (0)

ISLOGICAL

Purpose: Returns TRUE (1) if a cell is TRUE (1), or FALSE (0) if the value is (0) FALSE.

Format: =ISLOGICAL(value)

Examples:

=ISEVEN(A2) equals TRUE (1) where cell A2 contains "1"
=ISEVEN(0) equals FALSE (0)

ISNA

Purpose: Returns 1 (true) for the value NA, and 0 (false) for any other value.

Format: =ISNA(value)

Examples:

=ISNA(D2) equals 1 where cell D2 contains "=NA"
=ISNA(D2) equals 0 where cell D2 contains any other value
[=ISNA(cell address)]

ISNONTEXT

Purpose: Returns 1 (true) if a cell or range of cells (including blank cells) is not formatted as text.

Format: =ISNONTEXT(value)

Examples:

=ISNONTEXT(D1) is 1 (true) where cell D1 contains the value "1,502"
=ISNONTEXT(E1) is 0 (false) where cell E1 contains the text "budget"
=ISNONTEXT(cell address or range)

ISNUMBER

Purpose: Returns 1 (true) if a cell or range of cells (including blank cells) is not formatted as text.

Format: =ISNUMBER(value)

Examples:

=ISNUMBER(D1) is 1 (true) where cell D1 contains the value "1,502"
=ISNUMBER(E1) is 0 (false) where cell E1 contains the text "budget"
=ISNUMBER(cell address)

ISODD

Purpose: Returns TRUE (1) if a cell is odd, or FALSE (0) if the number is even.

Format: =ISODD(value)

Examples:

=ISODD(A2) equals FALSE (1) where cell A2 contains "42"
=ISODD(69) equals TRUE (0)

ISREF

Purpose: Returns TRUE (1) if a cell or range contains a reference to another cell or range, otherwise it returns FALSE (0).

Format: =ISREF(value)

Examples:

=ISREF(A2) equals TRUE (1) where cell A2 contains "=G6"
=ISREF(A3) equals FALSE (0) where cell A3 contains "69"

ISTEXT

Purpose: Returns 1 (true) for a numeric value, NA, ERR, or blank, and 0 (false) for text.

Format: =ISTEXT(value)

Examples:

=ISTEXT(D1) is 0 (false) where cell D1 contains the value "1,502"

=ISTEXT(E1) is 1 (true) where cell E1 contains the text "budget"
ISTEXT(cell address)

N

Purpose: N returns a value converted to a number.

Format: =N(value)

Examples:

=N("hello") equals 0 because it's text
=N(A2) equals 42 where A2 contains 42
=N(A3) equals 41410 where A3 contains 5/16/2013

NA

Purpose: NA () [Not Available] is used to mark a cell as being empty so that it is not included in calculations.

Format: =NA

Examples:

=NA

TYPE

Purpose: Returns the type of value in a cell (i.e., number, text, logical value, formula, error value).

Format: =TYPE(value) Number = 1; Text = 2; Logical value = 4; Formula = 8; Error value = 16

Examples:

=TYPE(A20) equals 16 where cell A20 contains "=NA"

=TYPE(B2) equals 2 where cell B2 contains "January"

=TYPE(B3) equals 1 where cell B3 contains "15"