



Dexian
C o n s u l t i n g

EXCEL TRAINING – DAY 1

FLOW OF SESSION

FLOW OF SESSION

Day 1

1. Microsoft Excel Fundamentals
2. Entering and Editing Text & Formulas
3. Working with Basics Excel Functions
4. Modifying an Excel Worksheet
5. Formatting Data in an Excel Worksheet
6. Inserting Images & Shapes into an Excel Worksheet
7. Creating Charts
8. Printing an Excel Worksheets
9. Excel Templates

Day 2

1. Working with an Excel List
2. Excel List Functions
3. Excel Data Validations
4. Importing and Exporting Data
5. Excel Pivot Tables
6. Working with Large Sets of Excel Data

MICROSOFT EXCEL FUNDAMENTALS

EXCEL START-UP SCREEN



Home
Main Menu
New
Open

Good morning

▼ New

Blank Workbook
Simple Gantt Chart
Gantt project planner
Loan amortization schedule
Cross-Functional Flowchart...
Employee attendance tracker
Student attendance record...

Templates

More templates →

Search

▼ Recommended for You

Marvel Discussions.xlsx
Harshad Mhatre edited this
Tue at 10:33 AM

Inventory Management Sheet_Agua...
You edited this
Tue at 03:45 PM

Recent Documents

Recent Pinned Shared with Me

Name	Date modified
Proposal Calculations.xlsx Ajay Thakur's OneDrive - Dexian Consulting » Documents » Work » 2. Sales » 2. Proposals » Mangalam Industries	Wed at 05:34 PM

Account
Other Menu
Feedback
Options

EXCEL INTERFACE

AutoSave Off | Quick Access Toolbar | Search | Ajay Thakur AT

File Home Insert Draw Page Layout Formulas Data Review View Automate Developer Help

Ribbons

Clipboard Font Alignment Number Styles Cells Editing Analysis

Name Bar | Formula Bar

Workbook Area

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
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WorkSheets Tab

Ready Accessibility: Good to go Status Bar 100%

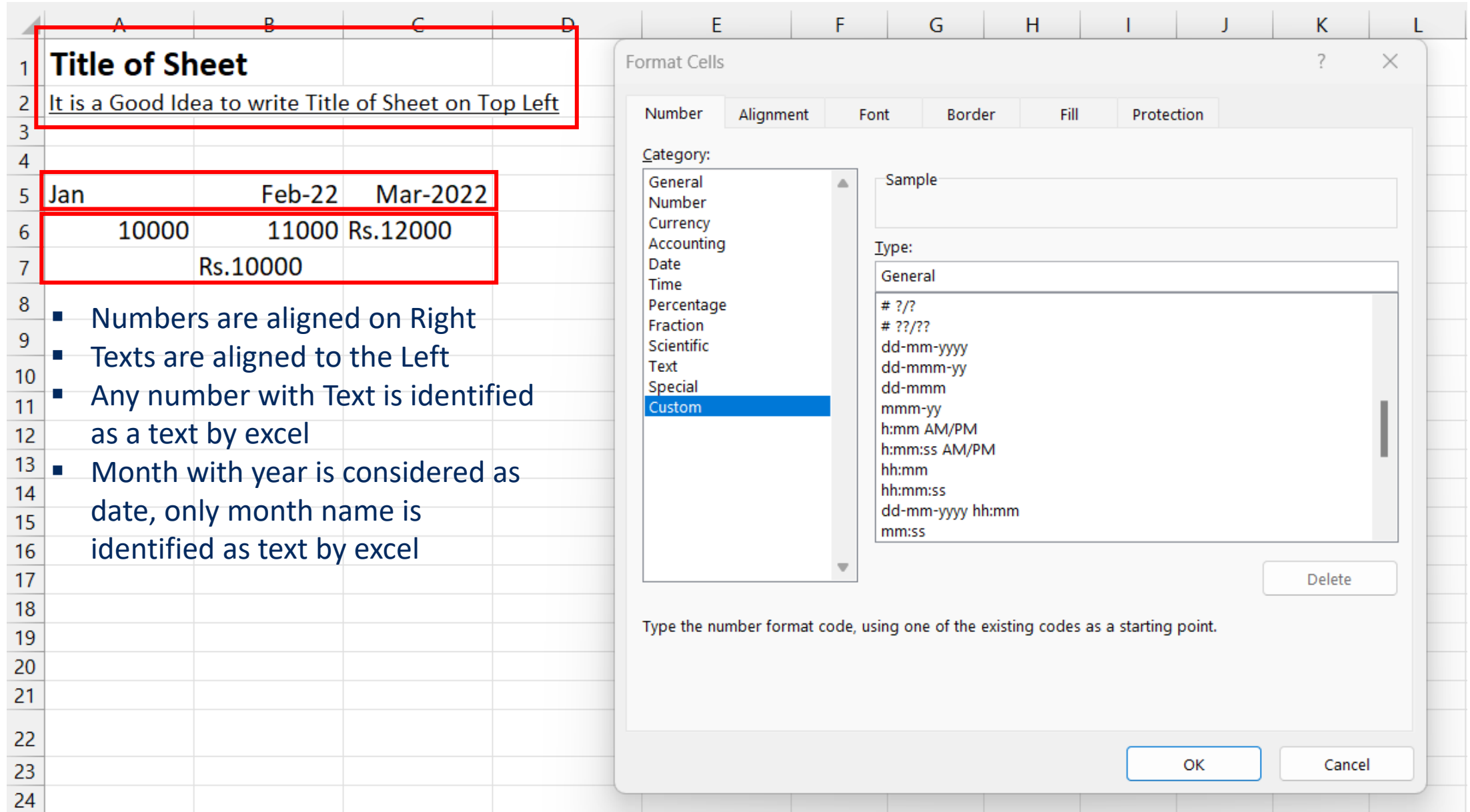
COMMON EXCEL SHORTCUT KEYS

To do this	Press
Close a spreadsheet	Ctrl+W
Open a spreadsheet	Ctrl+O
Go to the Home tab	Alt+H
Save a spreadsheet	Ctrl+S
Copy	Ctrl+C
Paste	Ctrl+V
Undo	Ctrl+Z
Remove cell contents	Delete key
Choose a fill color	Alt+H, H
Cut	Ctrl+X
Go to Insert tab	Alt+N
Bold	Ctrl+B
Center align cell contents	Alt+H, A, then C
Go to Page Layout tab	Alt+P
Go to Data tab	Alt+A
Go to View tab	Alt+W
Open context menu	Shift+F10, or Context key
Add borders	Alt+H, B
Delete column	Alt+H,D, then C
Go to Formula tab	Alt+M
Hide the selected rows	Ctrl+9
Hide the selected columns	Ctrl+0
Move to the previous cell in a worksheet or the previous option in a dialog box.	Shift+Tab
Move one cell up in a worksheet.	Up Arrow key

To do this	Press
Move one cell down in a worksheet.	Down Arrow key
Move one cell left in a worksheet.	Left Arrow key
Move one cell right in a worksheet.	Right Arrow key
Move to the edge of the current data region in a worksheet.	Ctrl+arrow key
Enter End mode, move to the next nonblank cell in the same column or row as the active cell, and turn off End mode. If the cells are blank, move to the last cell in the row or column.	End, arrow key
Move to the last cell on a worksheet, to the lowest used row of the rightmost used column.	Ctrl+End
Extend the selection of cells to the last used cell on the worksheet (lower-right corner).	Ctrl+Shift+End
Move to the cell in the upper-left corner of the window when Scroll Lock is turned on.	Home+Scroll Lock
Move to the beginning of a worksheet.	Ctrl+Home
Move one screen down in a worksheet.	Page Down
Move to the next sheet in a workbook.	Ctrl+Page Down
Move one screen to the right in a worksheet.	Alt+Page Down
Move one screen up in a worksheet.	Page Up
Move one screen to the left in a worksheet.	Alt+Page Up
Move to the previous sheet in a workbook.	Ctrl+Page Up
Move one cell to the right in a worksheet. Or, in a protected worksheet, move between unlocked cells.	Tab

ENTERING AND EDITING TEXT & FORMULAS

WORKING WITH NUMBERS & TEXT & DATE



The image shows an Excel spreadsheet with a red border around the top-left cell (A1) containing the text "Title of Sheet" and the cell below it (A2) containing "It is a Good Idea to write Title of Sheet on Top Left". Another red border highlights a table of data in rows 5-7 and columns A-C:

Jan	Feb-22	Mar-2022
10000	11000	Rs.12000
	Rs.10000	

Below the table, a list of bullet points explains Excel's handling of numbers, text, and dates:

- Numbers are aligned on Right
- Texts are aligned to the Left
- Any number with Text is identified as a text by excel
- Month with year is considered as date, only month name is identified as text by excel

Overlaid on the spreadsheet is the "Format Cells" dialog box. The "Number" tab is active, and the "Category" list on the left has "Custom" selected. The "Type" field on the right shows a list of format codes, including "# ??/??", "dd-mm-yyyy", "dd-mmm-yy", "dd-mmm", "mmm-yy", "h:mm AM/PM", "h:mm:ss AM/PM", "hh:mm", "hh:mm:ss", "dd-mm-yyyy hh:mm", and "mm:ss". The "Delete" button is visible at the bottom right of the dialog box. At the bottom of the dialog box, there are "OK" and "Cancel" buttons.

CELL REFERENCING IN EXCEL

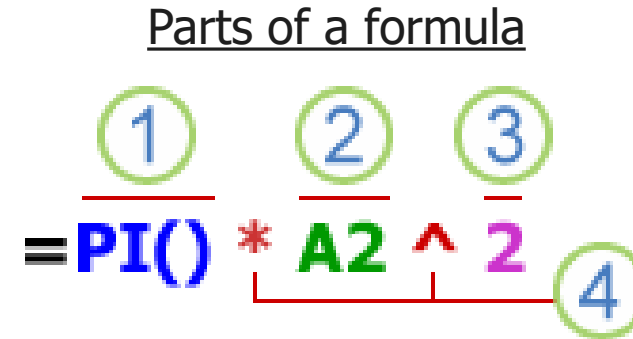
- A cell reference refers to a cell or a range of cells on a worksheet and can be used in a formula so that Microsoft Office Excel can find the values or data that you want that formula to calculate.
- Referencing a Cell means referring to the Cell name in a formula.
- Cell name is written by using Column alphabet as 1st Character and Row Number after it.
 - Eg. A1, B507, C10
- A single cell or multiple cells can be referenced.
 - Eg. A1:B107, C10:F709
- Multiple cells together is called a Range

	Jan-22	Feb-22	Mar-2022
	10000	11000	12000
	11001	11002	11003
	11002	11003	11004
	11003	11004	11005
	11004	11005	11006
	11005	11006	11007
	11006	11007	11008
	11007	11008	11009
	=SUM(A6:C10)		

Jan-22
10000
11001
11002
11003
11004
11005
11006
11007
=SUM(A5:A13)

EXCEL FORMULA STRUCTURE

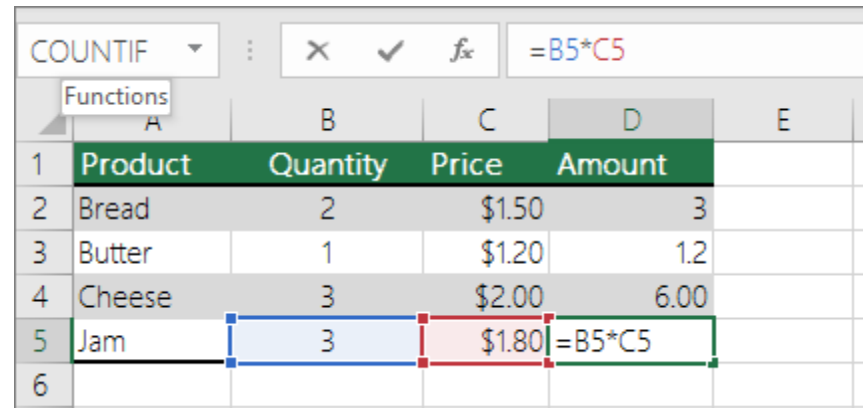
A formula can also contain any or all of the following: **functions**, **references**, **operators**, and **constants**.



1. **Functions:** The [PI\(\) function](#) returns the value of pi: 3.142...
2. **References:** A2 returns the value in cell A2.
3. **Constants:** Numbers or text values entered directly into a formula, such as 2.
4. **Operators:** The ^ (caret) operator raises a number to a power, and the * (asterisk) operator multiplies numbers.

RELATIVE VERSUS ABSOLUTE CELL REFERENCES IN FORMULAS

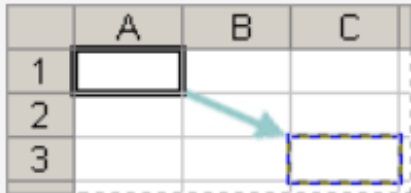
- By default, a cell reference is a relative reference, which means that the reference is relative to the location of the cell. If, for example, you refer to cell A2 from cell C2, you are actually referring to a cell that is two columns to the left (C minus A)—in the same row (2). When you copy a formula that contains a relative cell reference, that reference in the formula will change.
- As an example, if you copy the formula **=B4*C4** from cell D4 to D5, the formula in D5 adjusts to the right by one column and becomes **=B5*C5**. If you want to maintain the original cell reference in this example when you copy it, you make the cell reference absolute by preceding the columns (B and C) and row (2) with a dollar sign (\$). Then, when you copy the formula **=\$B\$4*\$C\$4** from D4 to D5, the formula stays exactly the same.



	A	B	C	D	E
1	Product	Quantity	Price	Amount	
2	Bread	2	\$1.50	3	
3	Butter	1	\$1.20	1.2	
4	Cheese	3	\$2.00	6.00	
5	Jam	3	\$1.80	=B5*C5	
6					

HOW REFERENCES UPDATE

- The table below summarizes how a reference type updates if a formula containing the reference is copied two cells down and two cells to the right.

For a formula being copied:	If the reference is:	It changes to:
	\$A\$1 (absolute column and absolute row)	\$A\$1 (the reference is absolute)
	A\$1 (relative column and absolute row)	C\$1 (the reference is mixed)
	\$A1 (absolute column and relative row)	\$A3 (the reference is mixed)
	A1 (relative column and relative row)	C3 (the reference is relative)

UNDERSTANDING ORDER OF OPERATION

- The elements to be calculated (the operands, such as numbers or cell references), are separated by calculation operators (such as +, -, *, or /).
- Excel calculates the formula from left to right, according to a specific order for each operator in the formula.
- If you combine several operators in a single formula, Excel performs the operations in the order shown in the following table.

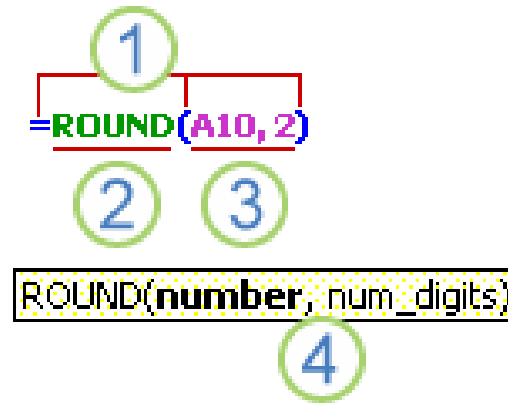
: (colon) (single space) , (comma)	Reference operators
–	Negation (as in –1)
%	Percent
^	Exponentiation (raising to a power)
* and /	Multiplication and division
+ and –	Addition and subtraction
&	Connects two strings of text (concatenation)
= < > <= >= <>	Comparison

BASIC EXCEL FUNCTIONS

EXCEL FUNCTION STRUCTURE

Functions are predefined formulas that perform calculations by using specific values, called arguments, in a particular order, or structure. Functions can be used to perform simple or complex calculations. You can find all of Excel's functions on the Formulas tab on the Ribbon.

Excel function syntax



- 1. Structure.** The structure of a function begins with an equal sign (=), followed by the function name, an opening parenthesis, the arguments for the function separated by commas, and a closing parenthesis.
- 2. Function name.**
- 3. Arguments.** Arguments can be numbers, text, logical values such as **TRUE** or **FALSE**, arrays, error values such as #N/A, or cell references. The argument you designate must produce a valid value for that argument. Arguments can also be constants, formulas, or other functions.
- 4. Argument tooltip.** A tooltip with the syntax and arguments appears as you type the function.

LIST OF COMMONLY USED FUNCTIONS IN EXCEL

- Count
- Sum
- Average
- Max-Min

SUM FUNCTIONS

SUM: The SUM function adds values. You can add individual values, cell references or ranges or a mix of all three.

Syntax – **SUM(number1,[number2],...)**

- Up to 255 Arguments

SUMIF: Use the SUMIF function to sum the values in a range that meet criteria that you specify.

Syntax – **SUMIF(range, criteria, [sum_range])**

SUMIFS: The SUMIFS function adds all of its arguments that meet multiple criteria.

Syntax – **SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)**

- Up to 127 range/criteria pairs

COUNT FUNCTIONS

COUNT: The COUNT function counts the number of cells that contain numbers, and counts numbers within the list of arguments.

Syntax – **COUNT(value1, [value2], ...)**

- Up to 255 Arguments

COUNTIF: Use COUNTIF, to count the number of cells that meet a criterion.

Syntax – **COUNTIF(range, criteria)**

COUNTIFS: The COUNTIFS function applies criteria to cells across multiple ranges and counts the number of times all criteria are met.

Syntax – **COUNTIFS(criteria_range1, criteria1, [criteria_range2, criteria2]...)**

- Up to 127 range/criteria pairs

AVERAGE FUNCTIONS

AVERAGE: Returns the average (arithmetic mean) of the arguments.

Syntax – **AVERAGE(number1, [number2], ...)**

- Up to 255 Arguments

AVERAGEIF: Returns the average (arithmetic mean) of all the cells in a range that meet a given criteria.

Syntax – **AVERAGEIF(range, criteria, [average_range])**

AVERAGEIFS: Returns the average (arithmetic mean) of all cells that meet multiple criteria.

Syntax – **AVERAGEIFS(average_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)**

- Up to 127 range/criteria pairs

MAX – MIN FUNCTION

Max / Min: Return the minimum or maximum of a set of values contained in a specified field on a query.

Syntax – **Max(expr)**

Min(expr)

MAXIFS: The MAXIFS function returns the maximum value among cells specified by a given set of conditions or criteria.

Syntax – **MAXIFS(max_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)**

- Up to 126 range/criteria pairs

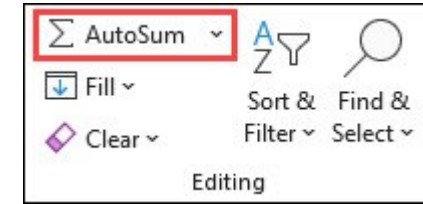
MINIFS: The MINIFS function returns the minimum value among cells specified by a given set of conditions or criteria.

Syntax – **MINIFS(min_range, criteria_range1, criteria1, [criteria_range2, criteria2], ...)**

- Up to 126 range/criteria pairs

AUTOSUM

- If you need to sum a column or row of numbers, let Excel do the math for you. Select a cell next to the numbers you want to sum, click AutoSum on the Home tab, press Enter, and you're done.
- When you click AutoSum, Excel automatically enters a formula (that uses the SUM function) to sum the numbers.
- Here's an example. To add the January numbers in this Entertainment budget, select cell B7, the cell immediately below the column of numbers. Then click AutoSum. A formula appears in cell B7, and Excel highlights the cells you're totalling.
- Press Enter to display the result (95.94) in cell B7. You can also see the formula in the formula bar at the top of the Excel window.



	A	B	C	D
1		Jan	Feb	
2	Entertainment			
3	Cable TV	52.98	52.98	
4	Video Rentals	7.98	11.97	
5	Movies	16.00	32.00	
6	CDs	18.99	29.99	
7	Totals	=SUM(B3:B6)		
8				

MODIFYING AN EXCEL WORKSHEET

INSERT OR DELETE ROWS AND COLUMNS

Insert or delete a column

- Select any cell within the column, then go to Home > Insert > Insert Sheet Columns or Delete Sheet Columns.
- Alternatively, right-click the top of the column, and then select Insert or Delete.

Insert or delete a row

- Select any cell within the row, then go to Home > Insert > Insert Sheet Rows or Delete Sheet Rows.
- Alternatively, right-click the row number, and then select Insert or Delete.

RESIZE ROWS & COLUMNS


Resize rows

- Select a row or a range of rows.
- On the Home tab, select Format > Row Width (or Row Height).
- Type the row width and select OK.

Resize columns

- Select a column or a range of columns.
- On the Home tab, select Format > Column Width (or Column Height).
- Type the column width and select OK.

Automatically resize all columns and rows to fit the data

- Select the Select All button Select All at the top of the worksheet,  to select all columns and rows.
- Double-click a boundary. All columns or rows resize to fit the data.

HIDING AND UNHIDING EXCEL ROWS AND COLUMNS

Hide columns

- Select one or more columns, and then press Ctrl to select additional columns that aren't adjacent.
- Right-click the selected columns, and then select Hide.

Note: The double line between two columns is an indicator that you've hidden a column.

Unhide columns

- Select the adjacent columns for the hidden columns.
- Right-click the selected columns, and then select Unhide.
- Or double-click the double line between the two columns where hidden columns exist.

RENAMING AN EXCEL WORKSHEET

By default, Excel names worksheets Sheet1, Sheet2, Sheet3 and so on, but you can easily rename them.



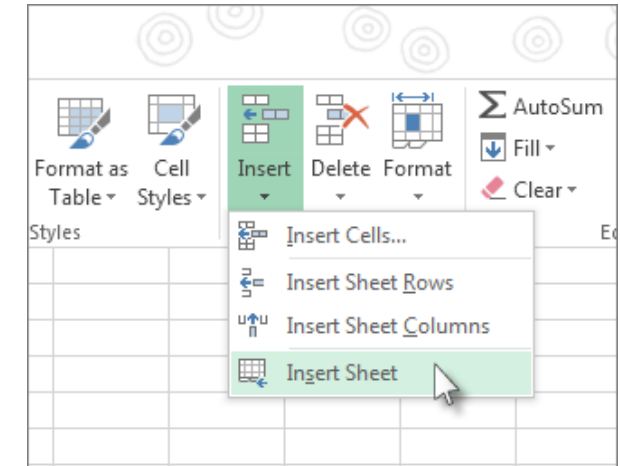
3 ways to rename a worksheet

- Double-click the sheet tab, and type the new name.
- Right-click the sheet tab, click Rename, and type the new name.
- Use the keyboard shortcut Alt+H > O > R, and type the new name.

INSERT OR DELETE OR MOVE A WORKSHEET

Insert a worksheet

- Select the New Sheet plus icon Select  at the bottom of the workbook.
- Or select Home > Insert > Insert Sheet.




Rename a worksheet

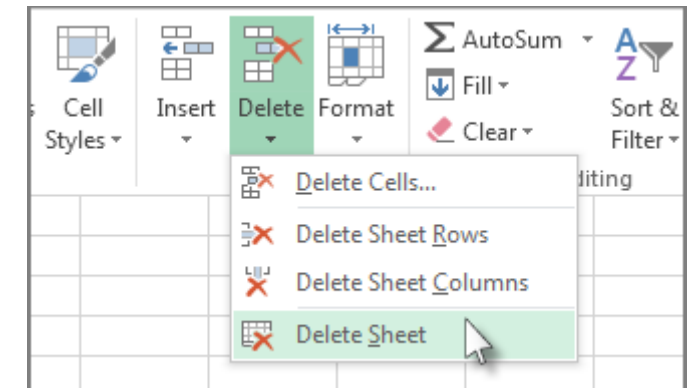
- Double-click the sheet name on the Sheet tab to quickly rename it.
- Or right-click on the Sheet tab, click Rename, and type a new name.

Move a worksheet

- To move the tab to the end, right-click the Sheet tab then Move or Copy > (move to end) > OK .
- Or click and drag to tab to any spot.

Delete a worksheet

- Right-click the Sheet tab and select  Delete.
- Or select the sheet, and then select Home > Delete > Delete Sheet.

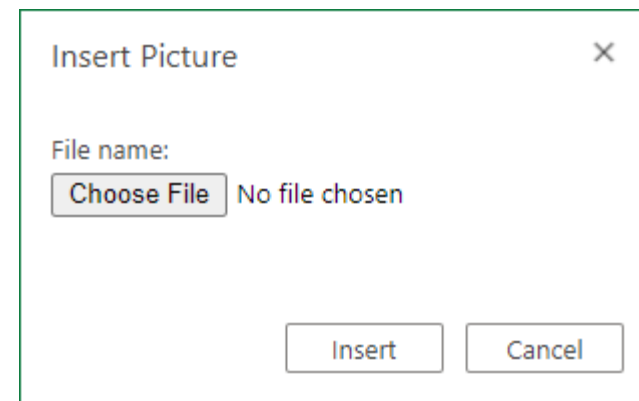
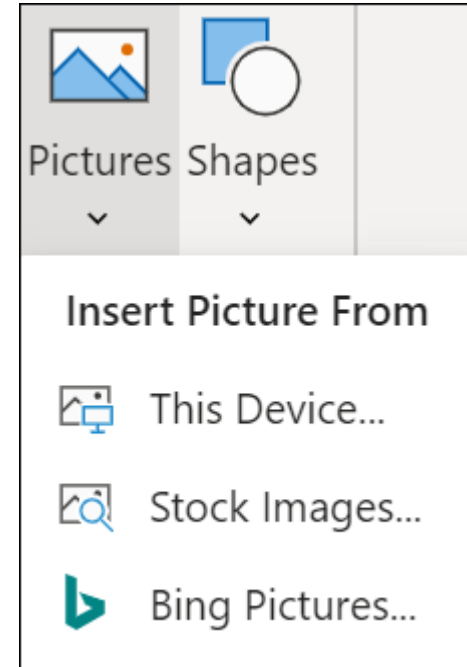


INSERTING IMAGES AND SHAPES INTO AN EXCEL WORKSHEET

INSERT A PICTURE IN EXCEL

To insert a picture that is saved in a location you can access, follow these steps:

- Click the location in your worksheet where you want to insert a picture.
- On the Insert ribbon, click Pictures.
- Select This Device...
- Browse to the picture you want to insert, select it, and then click Open.
- The picture will be inserted in your worksheet.

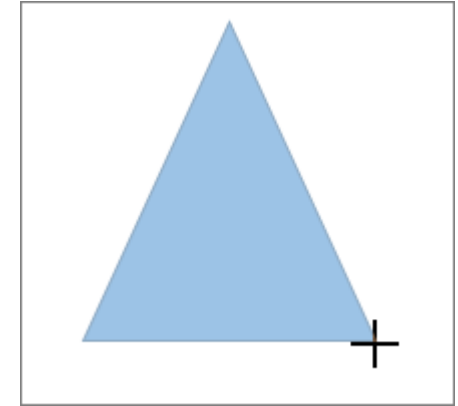


ADD A SHAPE IN EXCEL & FORMAT SHAPES

- On the Insert tab, click Shapes.



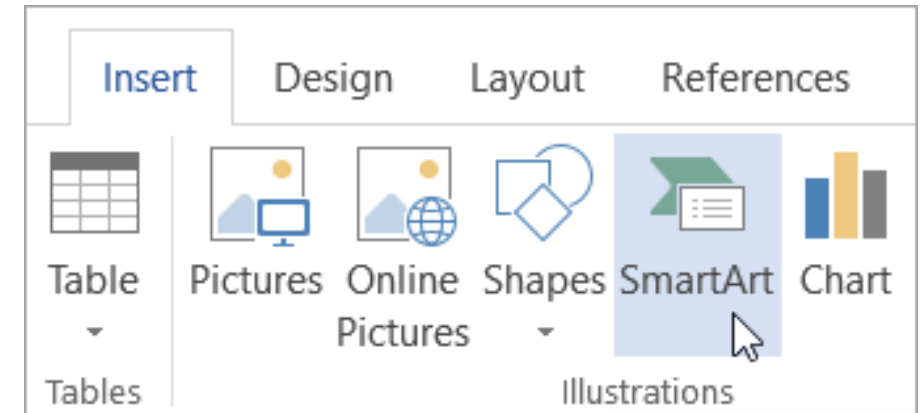
- Click the shape you want, click anywhere in the workspace, and then drag to place the shape.
- To create a perfect square or circle (or constrain the dimensions of other shapes), press and hold Shift while you drag.
- After you've added shapes to your document, spreadsheet, presentation, or email, make the shapes look exactly how you want.
- Select the shapes you want to format.
- Select Shape Fill to fill the selected shapes with a solid color, gradient, texture, or picture.
- Select Shape Outline to pick the color, width, or line style for your shape's border.
- Select Shape Effects to give your shapes a shadow, reflection, or glow.
- Select a Shape Style to apply a unique combination of colors, lines, and other effects that look great together.
- Tip: To select more than one, press and hold the Shift key.



EXCEL SMARTART

Insert a SmartArt graphic and add text to it

- On the Insert tab, in the Illustrations group, click SmartArt.
- In the Choose a SmartArt Graphic dialog box, click the type and layout that you want.
- Enter your text by doing one of the following:
 - Click [Text] in the Text pane, and then type your text.
 - Copy text from another location or program, click [Text] in the Text pane, and then paste your text.
 - Notes: If the Text pane is not visible, click the arrow control on the left side of the SmartArt graphic.
 - Click in a box in the SmartArt graphic, and then type your text. For best results, use this option after you add all of the boxes that you want.






CREATING BASIC CHARTS IN EXCEL

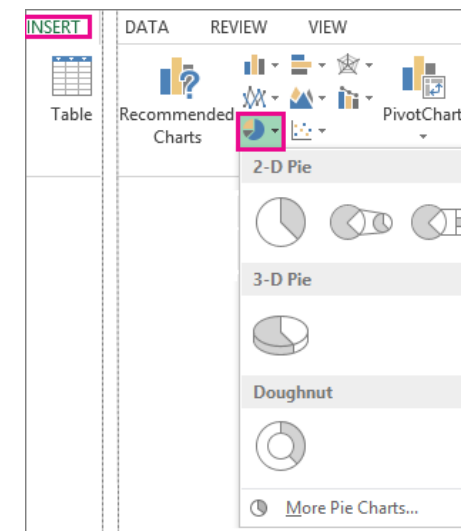
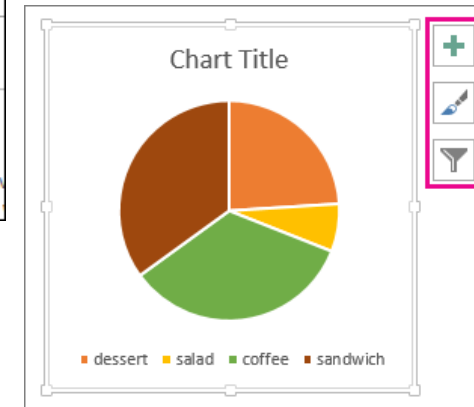
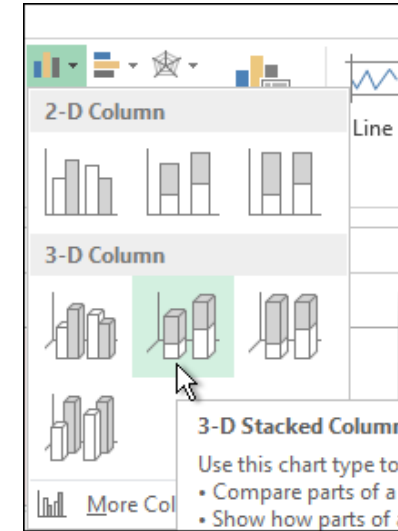
CREATING AN EXCEL COLUMN & PIE CHART

To create a column chart, follow these steps:

- Enter data in a spreadsheet.
- Select the data.
- Click Insert > Insert Column or Bar Chart icon and select a column chart option of your choice.

To create a pie chart, follow these steps:

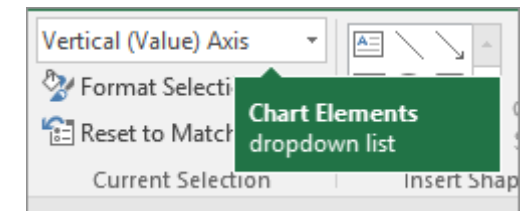
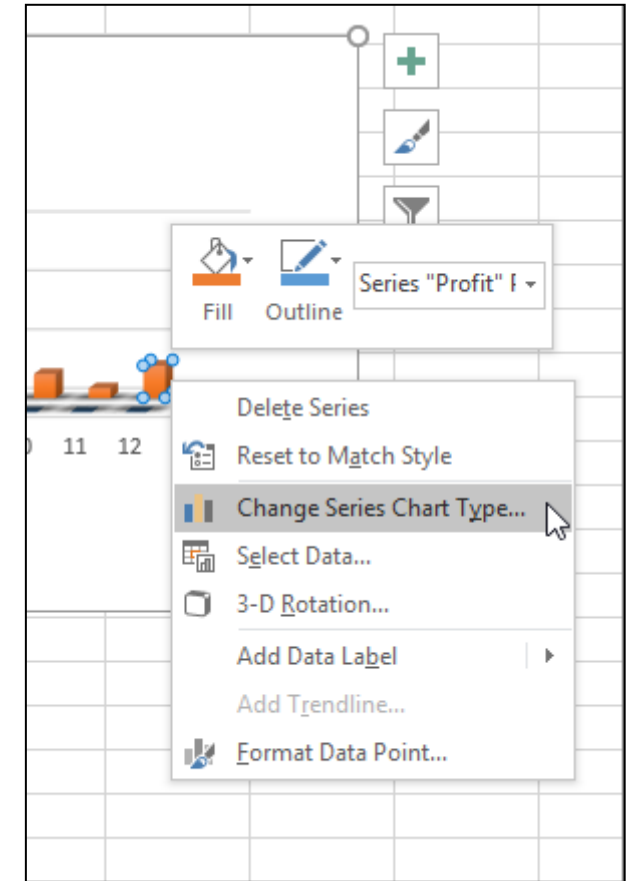
- In your spreadsheet, select the data to use for your pie chart.
- Click Insert > Insert Pie or Doughnut Chart, and then pick the chart you want.
- Click the chart and then click the icons next to the chart to add finishing touches:
 - To show, hide, or format things like axis titles or data labels, click Chart Elements. 
 - To quickly change the color or style of the chart, use the Chart Styles. 
 - To show or hide data in your chart click Chart Filters. 
- Pie chart with Chart Elements, Chart Styles, and Chart Filters buttons
 - Tip: You can draw attention to individual slices of the pie chart by dragging them out



FORMATTING A CHART

You can optionally format the chart a little further. See the list below for a few options:

- Note: Make sure you click on the chart first before applying a formatting option.
- To apply a different chart layout, click Design > Charts Layout, and select a layout.
- To apply a different chart style, click Design > Chart Styles, and pick a style.
- To apply a different shape style, click Format > Shape Styles, and pick a style.
 - Note: A chart style is different from a shape style. A shape style is a formatting option that applies to the chart's border only, whereas the chart style is a formatting option that applies to the entire chart.
- To apply different shape effects, click Format > Shape Effects, and pick an option such as Bevel or Glow, and then a sub option.
- To apply a theme, click Page Layout > Themes, and select a theme.
- To apply a formatting option to a specific component of a chart (such as Vertical (Value) Axis, Horizontal (Category) Axis, Chart Area, to name a few), click Format > pick a component in the Chart Elements dropdown box, click Format Selection, and make any necessary changes. Repeat the step for each component you want to modify.
 - Note: If you are comfortable working in charts, you can also select and right-click on a specific area on the chart and select a formatting option.



PRINTING AN EXCEL WORKSHEET

PRINT WORKBOOK & WORKSHEET

Print one or several worksheets

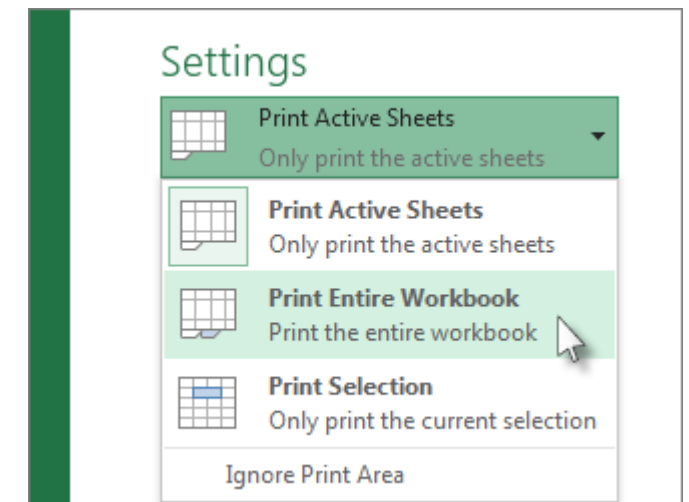
- Select the worksheets that you want to print.
- Select File > Print, or press CTRL+P.
- Select the Print button or adjust Settings before you select the Print button.

Print one or several workbooks

- All workbook files that you want to print must be in the same folder.
- Select File > Open.
- Hold down CTRL click the name of each workbook to print, and then select Print.

Print all or part of a worksheet

- Click the worksheet, and then select the range of data that you want to print.
- Select File, and then click Print.
- Under Settings, select the arrow next to Print Active Sheets and select the appropriate option.
- Select Print.



THANK YOU