EXCEL INTERMEDIATE

PRESENTED BY:

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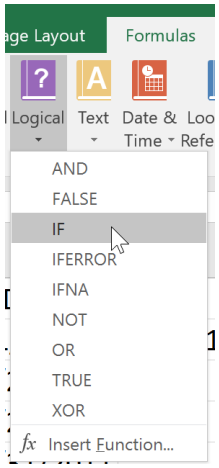
IF Statement

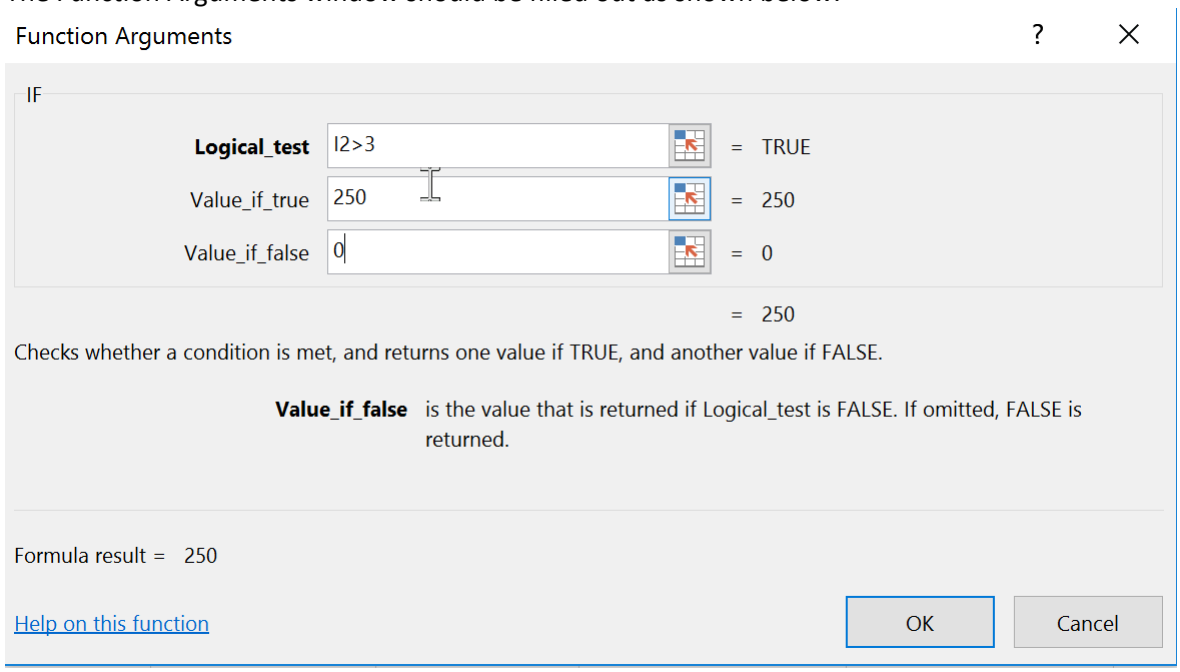
The Excel IF Function returns one value if a specified condition evaluates to TRUE, or another value if it evaluates to FALSE. In this example, each employee received a Job rating with 1 being the worst rating and 5 being the best rating. Each employee that has a job rating of 4 or 5 will receive a $250 bonus. The IF function can run the logical reference (greater than 3) and put the number 250 in each cell that meets that requirement. If the job rating is less than 4, the IF statement will put a zero in the cell.

G	H	I	J
Benefits	Salary	Job Rating	Bonus
DMR	$ 29,260	4	
DMR	$ 39,000	5	
D	$ 49,260	3	
R	$ 24,840	1	
R	$ 39,000	3	
	$ 74,500	4	
DMR	$ 79,730	2	

1. From the Formulas Tab >> Function Library select Logical and then IF.



2. The Function Arguments window should be filled out as shown below.



3. Use the AutoFill handle to copy the function.

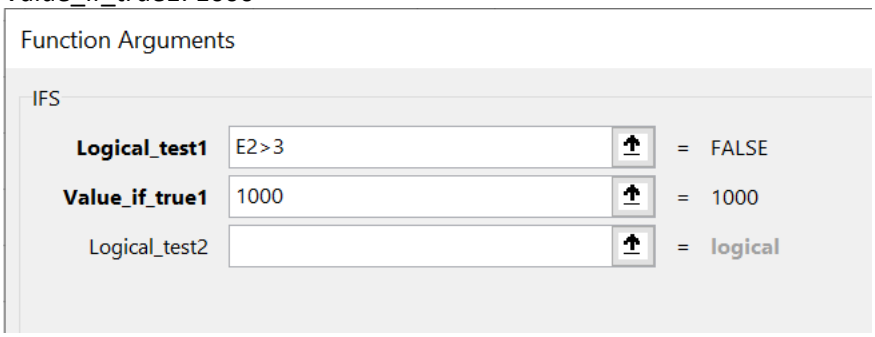
H	I	J
Salary	Job Rating	Bonus
$ 29,260	1	250
$ 39,000	5	250
$ 49,260	3	0
$ 24,840	1	0
$ 39,000	3	0
$ 74,500	4	250

IFS

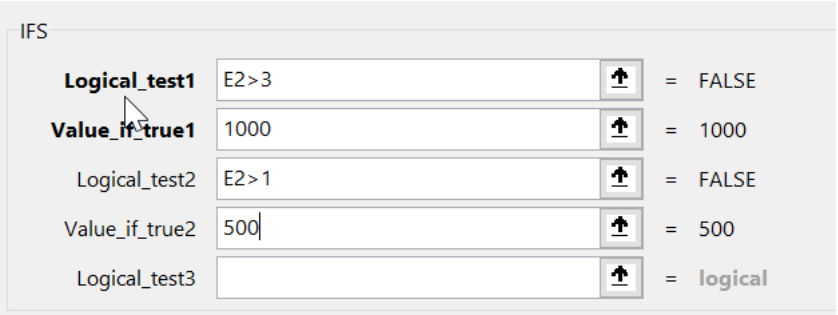
Tired of typing complicated, nested IF functions? The IFS function is the solution. With this function, conditions are tested in the order that you specify. If passed, the result is returned. You can also specify an else "catch all" if none of the conditions are met. To specify a default result, enter TRUE for your final logical_test argument. We can use the IFS function to apply bonuses in the table below. A Job rating greater than 3 will receive $1000, a Job rating greater than 1 will receive $500 and all others will receive $0.

Job Rating	Bonus
5	$1000
4	$1000
3	$500
2	$500
1	$0

1. Formulas Tab >> Logical >> IFS
2. Enter in your logical test: E2>3
3. Value_if_true1: 1000

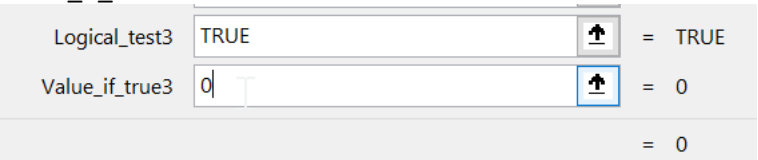


4. Logical_test2: E2>1
5. Value_if_true2: 500



6. Logical-test3: True

7. Value_if_true3: 0

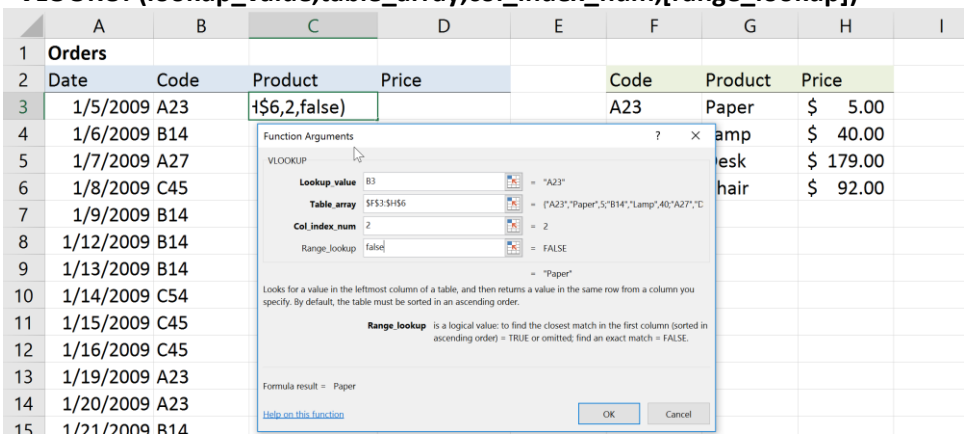


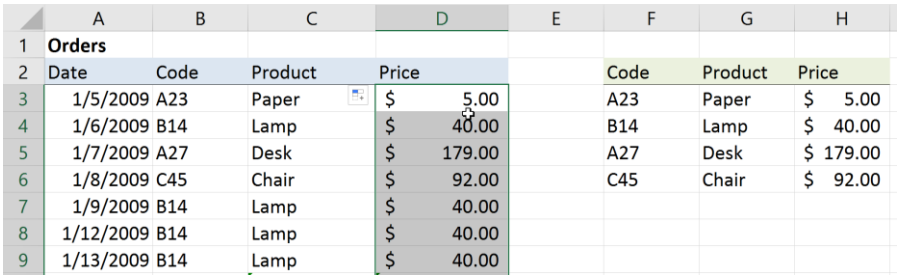
VLOOKUP

There are several Excel functions that you can use to look up and return information within a table. The most popular function for most users is VLOOKUP, which searches the first column of a range of cells and then returns a value from any cell on the same row.

The inherent limitation of VLOOKUP is that whatever value you want to return ***must*** be to the right of that first search row.

=VLOOKUP(lookup_value,table_array,col_index_num,[range_lookup])





In this example we are using the Code in column B as the lookup value. Our table array is an absolute reference to cells F3:H6. Column F provides the lookup reference in the left most column of the table array, referred to as column 1. Column G, referred to as column 2, will return the product name. Column H, referred to as column 3, will return the product price.

XLOOKUP

The Excel XLOOKUP function is a modern and flexible replacement for older functions like VLOOKUP, HLOOKUP, and LOOKUP. XLOOKUP supports approximate and exact matching, wildcards (* ?) for partial matches, and lookups in vertical or horizontal ranges.

Unlike the other match functions, XLOOKUP supports an optional argument called not_found that can be used to override the #N/A error when it would otherwise appear. Typical values for not_found might be "Not found", "No match", "No result", etc. When providing a value for not_found, enclose the text in double quotes ("").

Match type

By default, XLOOKUP will perform an *exact match*. Match behavior is controlled by an optional argument called **match_type,** which has the following options:

Match type	Behavior
0 (default)	Exact match. Will return #N/A if no match.
-1	Exact match or next smaller item.
1	Exact match or next larger item.
2	Wildcard match (*, ?, ~)

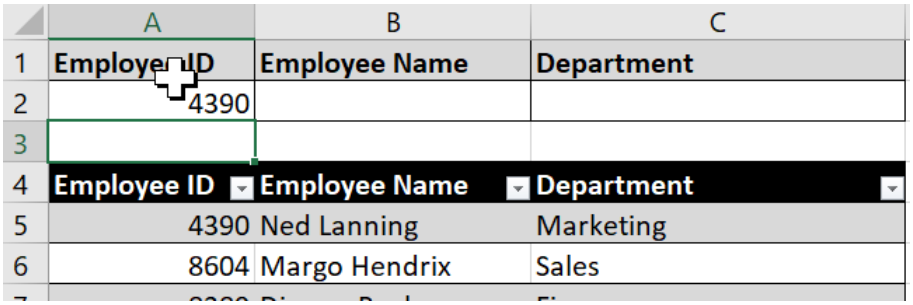
Search mode

By default, XLOOKUP will start matching from the first data value. Search behavior is controlled by an optional argument called **search_mode**, which provides the following options:

Search mode	Behavior
1 (default)	Search from first value
-1	Search from last value (reverse)
2	Binary search values sorted in ascending order
-2	Binary search values sorted in descending order

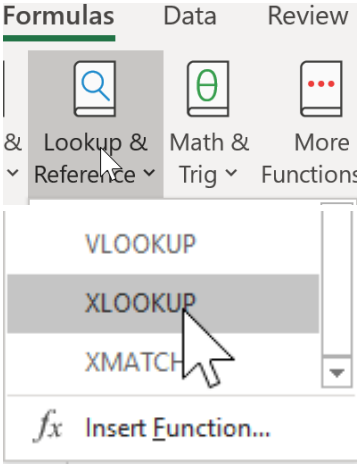
Binary searches are very fast, but *data must be sorted as required*. If data is not sorted properly, a binary search can return invalid results that look perfectly normal.

1. In this example we will use XLOOKUP instead of VLOOKUP to find the Employee Name and Department by entering the Employee ID in cell A2. NOTE: the data (A4:C14) is a table. This will allow for a user to add/delete data into the table and have the range automatically updated.

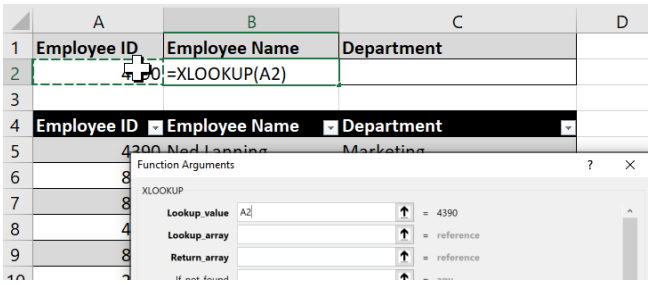


	A	B	C
1	Employee ID	Employee Name	Department
2	4390		
3			
4	Employee ID	Employee Name	Department
5	4390	Ned Lanning	Marketing
6	8604	Margo Hendrix	Sales

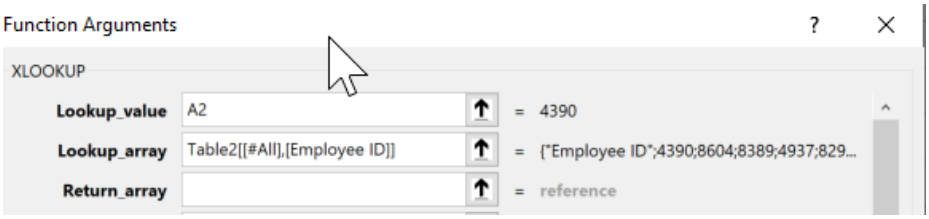
2. Click in cell B2 (Employee Name). Formulas Tab >> Lookup and Reference >> XLOOKUP.



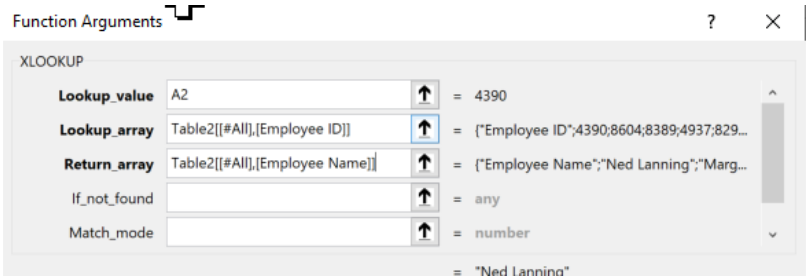
3. The Lookup_value is the Employee ID – Cell A2.



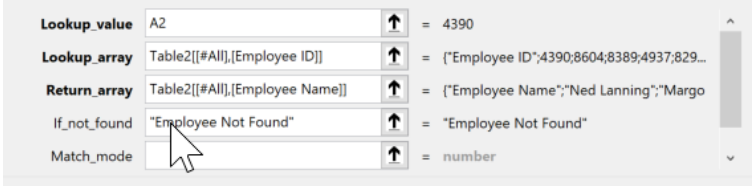
4. Click in Lookup_Array. Highlight the Employee ID Range below A4:A14 – notice the range is a table reference instead of an exact cell range.



5. Click in Return_array. This is the column of data you want to return which is the Employee Name (B4:B14).



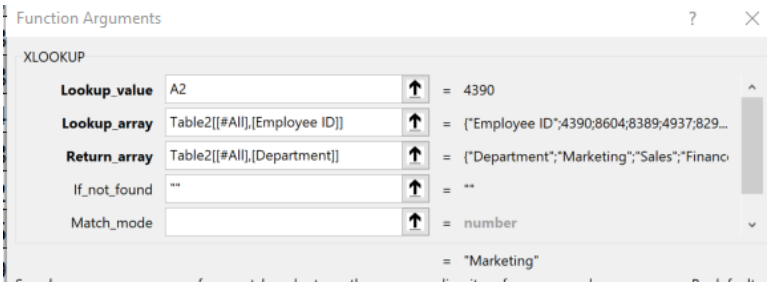
6. If_not_found can be used to return text such as "Employee Not Found" instead of the error message #N/A.



7. Click OK.

	A	B	C
1	**Employee ID**	**Employee Name**	**Department**
2	4390	Ned Lanning	

8. Click in C2 to use XLOOKUP to find the Department. Formulas Tab >> Lookup and Reference >> XLOOKUP. The following should be entered: Lookup_Value (A2), Lookup_array (A4:A14), Return_array (C2:C14), If_not_found (“”) – this returns a blank cell. CLICK OK.



9. Change the Employee ID to lookup a new Employee Name and Department.

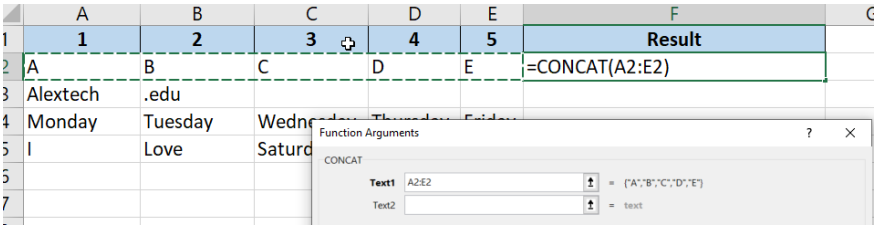
	A	B	C
1	**Employee ID**	**Employee Name**	**Department**
2	8604	Margo Hendrix	Sales
3			
4	**Employee ID**	**Employee Name**	**Department**
5	4390	Ned Lanning	Marketing
6	8604	Margo Hendrix	Sales
7	8389	Dianne Pugh	Finance

10. Results if an employee ID does not exist.

	A	B	C
1	**Employee ID**	**Employee Name**	**Department**
2	1234	Employee Not Found	
3			

CONCAT

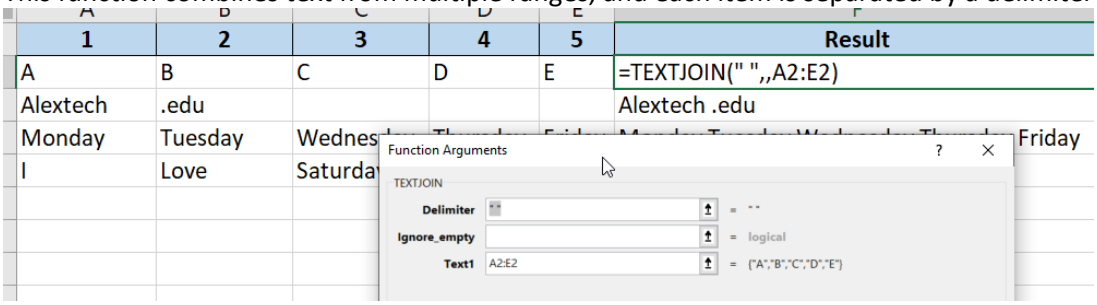
This new function is like CONCATENATE, but better. First, it's shorter and easier to type. But it also supports range references, in addition to cell references. The CONCAT function combines the text from multiple ranges and/or strings. Formulas Tab >> Text >> CONCAT



	A	B	C	D	E	F
1	**1**	**2**	**3**	**4**	**5**	**Result**
2	A	B	C	D	E	ABCDE
3	Alextech	.edu				Alextech.edu
4	Monday	Tuesday	Wednesday	Thursday	Friday	MondayTuesdayWednesdayThursdayFriday
5	I	Love	Saturdays			ILoveSaturdays

TEXTJOIN

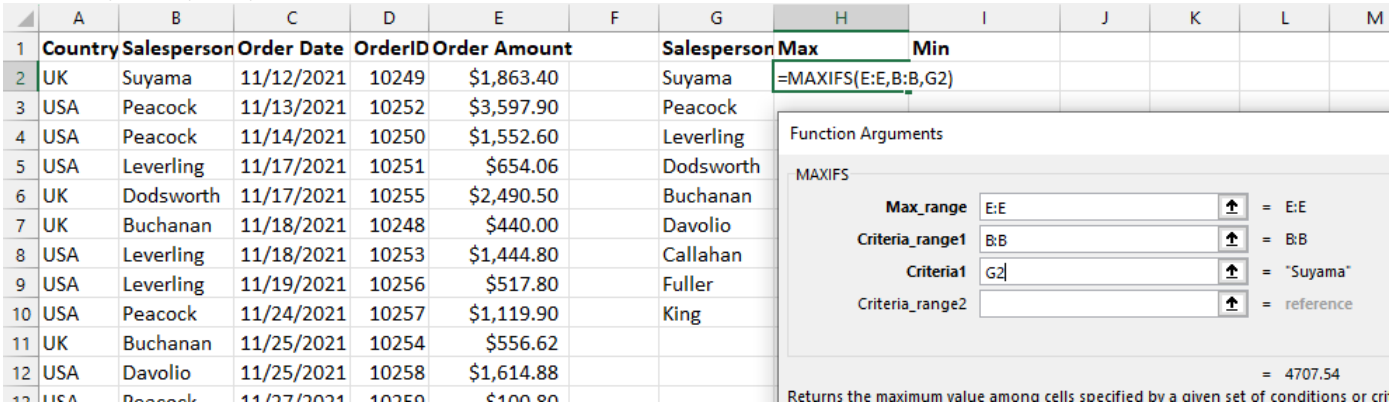
This function combines text from multiple ranges, and each item is separated by a delimiter that you specify.



1	2	3	4	5	Result
A	B	C	D	E	A B C D E
Alextech	.edu				Alextech .edu
Monday	Tuesday	Wednesday	Thursday	Friday	Monday Tuesday Wednesday Thursday Friday
I	Love	Saturdays			I Love Saturdays

MAXIFS

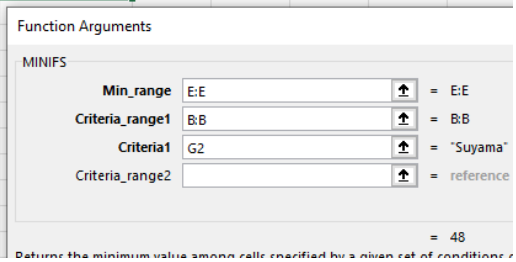
The MAXIFS function returns the maximum value among cells specified by a given set of conditions or criteria: numbers, dates, text, etc.



MINIFS

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

	A	B	C	D	E	F	G	H	I
1	Country	Salesperson	Order Date	OrderID	Order Amount		Salesperson	Max	Min
2	UK	Suyama	11/12/2021	10249	$1,863.40		Suyama	4707.54	=MINIFS(E:E,B:B,G2)
3	USA	Peacock	11/13/2021	10252	$3,597.90		Peacock	11188.4	
4	USA	Peacock	11/14/2021	10250	$1,552.60		Leverling	10952.84	
5	USA	Leverling	11/17/2021	10251	$654.06		Dodsworth	11380	
6	UK	Dodsworth	11/17/2021	10255	$2,490.50		Buchanan	9210.9	
7	UK	Buchanan	11/18/2021	10248	$440.00		Davolio	15810	
8	USA	Leverling	11/18/2021	10253	$1,444.80		Callahan	4825	
9	USA	Leverling	11/19/2021	10256	$517.80		Fuller	16387.5	
10	USA	Peacock	11/24/2021	10257	$1,119.90		King	12615.05	
11	UK	Buchanan	11/25/2021	10254	$556.62				
12	USA	Davolio	11/25/2021	10258	$1,614.88				



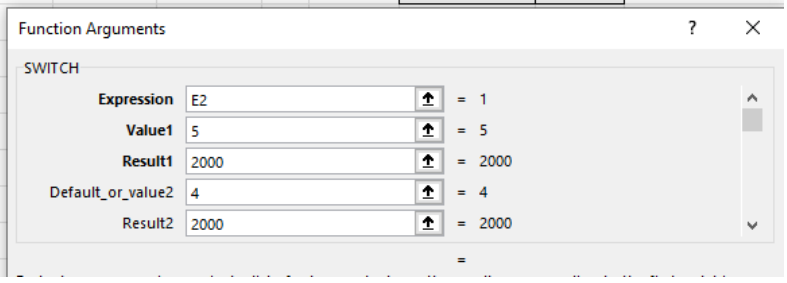
Results

	G	H	I
	Salesperson	Max	Min
	Suyama	$4,707.54	$48.00
	Peacock	$11,188.40	$18.40
	Leverling	$10,952.84	$45.00
	Dodsworth	$11,380.00	$12.50
	Buchanan	$9,210.90	$103.20
	Davolio	$15,810.00	$33.75
	Callahan	$4,825.00	$36.00
	Fuller	$16,387.50	$40.00
	King	$12,615.05	$60.00

SWITCH

The SWITCH function evaluates one value (called the expression) against a list of values and returns the result corresponding to the first matching value.

	D	E	F	G	H	I	J	K	L
	Status	Job Rating	Bonus		=		Job Rating	Bonus	
7	Full Time	1	=SWITCH(E2,5,2000,4,2000)				5	2000	
5	Half-Time	4			>=		4	2000	
6	Hourly	3			<		3	1000	
9	Full Time	2			<=		2	1000	
1	Full Time	4			<>		1	0	
3	Contract	5							
7	Full Time	1							
5	Full Time	5							
2	Full Time	1							
6	Full Time	3							
5	Full Time	4							
4	Full Time	3							



Job Rating	Bonus
1	0
4	2000
3	1000
2	1000
4	2000
5	2000

Date & Time Functions

NOW & TODAY FUNCTIONS

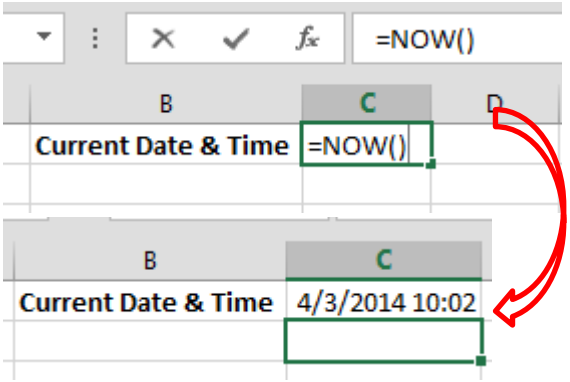
Manipulating Dates, Times & Text

NOW

In Excel, the **NOW** function returns the current system date and time. This function will refresh the date/time value whenever the worksheet recalculates. The syntax for the **NOW** function is: NOW()

1. Click in the cell you wish the current date to appear.

2. Type in the following: **=NOW()** and press the enter key.

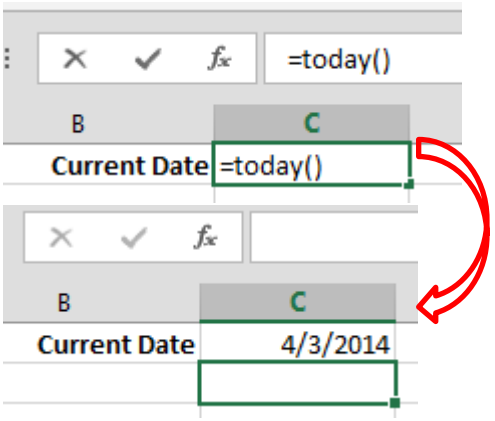


TODAY

In Excel, the **TODAY** function returns the current system date. This function will refresh the date whenever the worksheet recalculates. The syntax for the **TODAY** function is: TODAY()

1. Click in the cell you wish the current date to appear.

2. Type in the following: **=TODAY()** and press the enter key.



Date Keyboard Shortcuts

- Current Date Ctrl + ;
- Current Time Ctrl + Shift + ;

YEARFAC

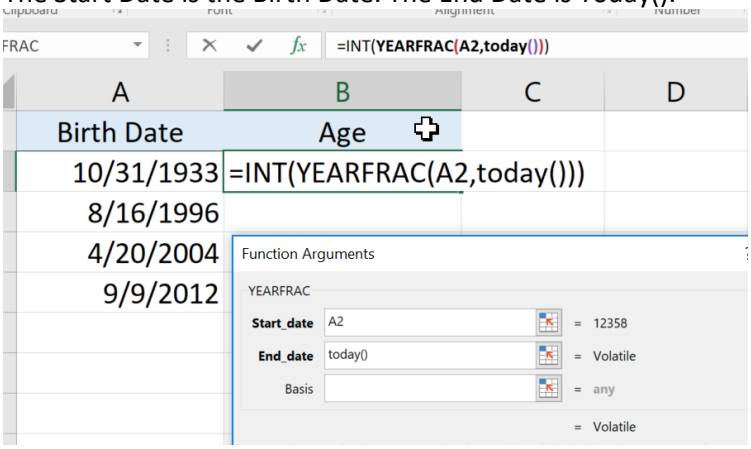
Age from Birthday

You can calculate a person's age from their birthdate by using the INT, YEARFRAC, and TODAY functions.
=(INT(YEARFRAC(birthdate,TODAY()))
YEARFRAC calculates a decimal number representing the fraction of a year between two dates. The INT function rounds down that number to the integer value. The TODAY function always calculates the age in comparison to the current date.

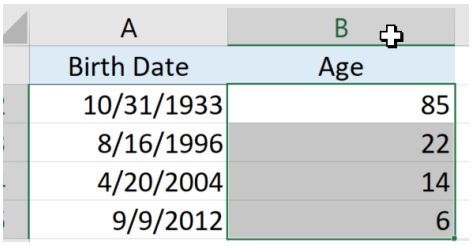
1. Formulas Tab >> Math & Trig >> INT

2. Use the name box dropdown >> More Functions and find the YEARFRAC Function.

3. The Start Date is the Birth Date. The End Date is Today().



4. Click OK.

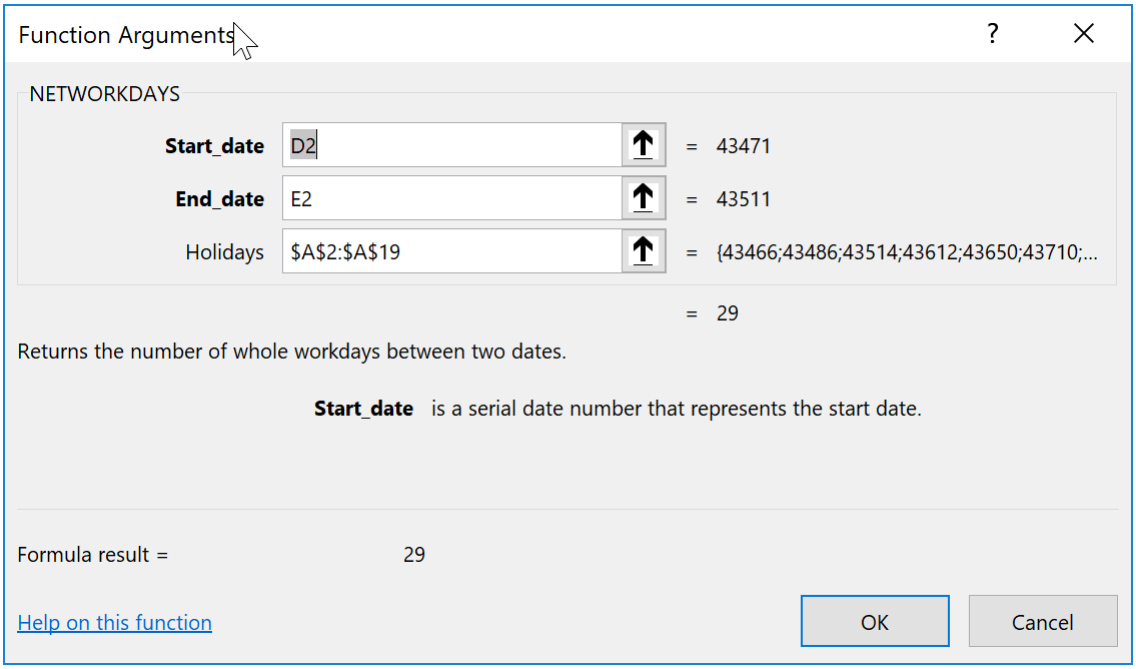


NETWORKDAYS FUNCTION

Returns the number of whole working days between start_date and end_date. Working days exclude weekends and any dates identified in holidays. Use NETWORKDAYS to calculate employee benefits that accrue based on the number of days worked during a specific term.

1. Click Formulas>>Date & Time>>NETWORKDAYS

2. Enter in the following cell references.



3. Click OK. Your result will be displayed.

D	E	F
Start Date	**Project Finish Date**	**Project Length**
1/6/2019	2/15/2019	29
2/11/2019	3/12/2019	21
6/10/2019	6/28/2019	15
7/28/2019	10/15/2019	56
11/16/2019	1/15/2020	39

NOTE: if you want the word **Days** to be displayed in the cell along with the number, click in the formula bar and use the ampersand (&) to add text. Text needs to be wrapped in quotes " Days".

```
=NETWORKDAYS(D2,E2,$A$2:$A$19)&" Days"
```

D	E	F
Start Date	**Project Finish Date**	**Project Length**
1/6/2019	2/15/2019	29 Days
2/11/2019	3/12/2019	21 Days
6/10/2019	6/28/2019	15 Days
7/28/2019	10/15/2019	56 Days
11/16/2019	1/15/2020	39 Days

Remarks

- Microsoft Excel stores dates as sequential serial numbers so they can be used in calculations. By default, January 1, 1900 is serial number 1, and January 1, 2008 is serial number 39448 because it is 39,448 days after January 1, 1900.

WORKDAY FUNCTION

WORKDAY()

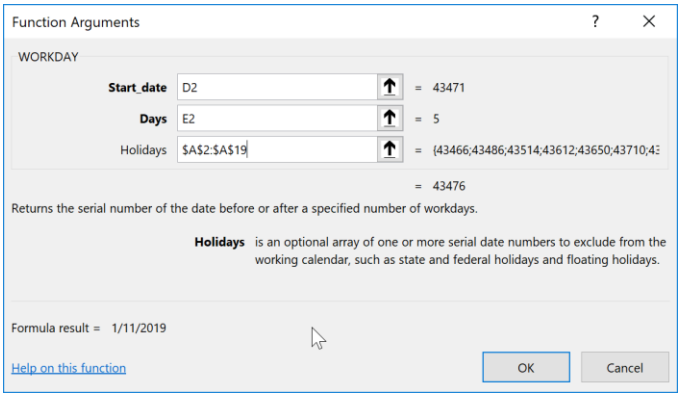
Occasionally, it may be useful to count ahead based on workdays (Monday-Friday) instead of all 7 days of the week… For that, Excel has provided **WORKDAY**.

The *start_date* is as above.

The *days* input is the number of workdays ahead (or behind) of the present day you would like to move.

D	E	F
Start Date	**Project Length**	**Project Finish Date**
1/6/2019	5	
2/11/2019	60	
6/10/2019	45	
7/28/2019	45	
11/16/2019	80	

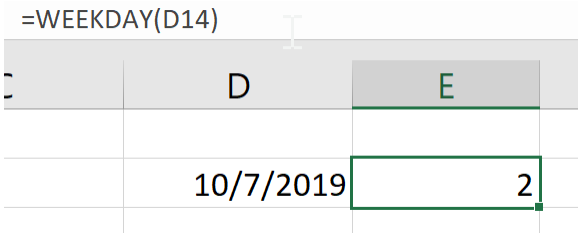
The *[holidays]* input is optional, but lets you disqualify specific days (like Thanksgiving or Christmas, for example), which might otherwise fall during the work week.



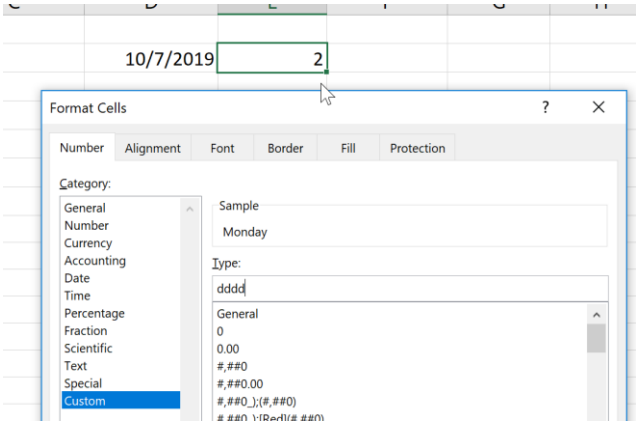
D	E	F
Start Date	**Project Length**	**Project Finish Date**
1/6/2019	5	1/11/2019
2/11/2019	60	5/7/2019
6/10/2019	45	8/13/2019
7/28/2019	45	9/30/2019
11/16/2019	80	3/16/2020

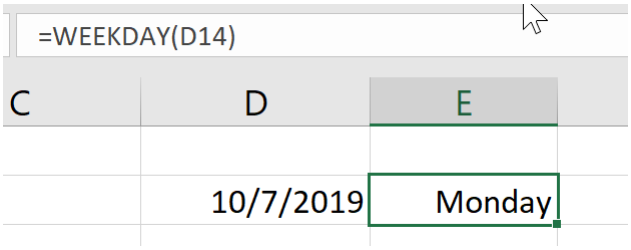
Weekday

The WEEKDAY function returns a number from 1 (Sunday) to 7 (Saturday) representing the day of the week of a date. The 6 in this example means it is Friday. **=Weekday(A1)**



You can custom format the number using ddd (Fri) or dddd (Friday). To do so, right mouse click the cell and select Format Cells. Select Custom. Enter in ddd or dddd. Click OK.

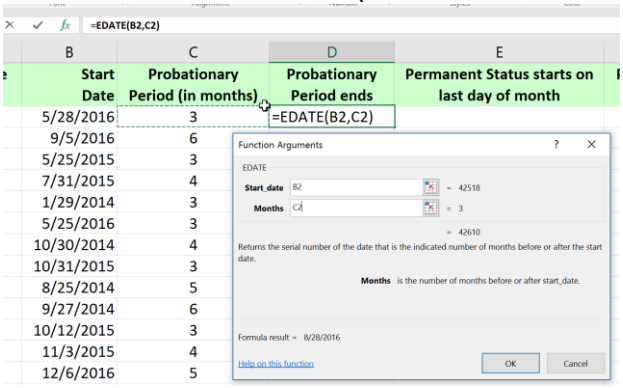


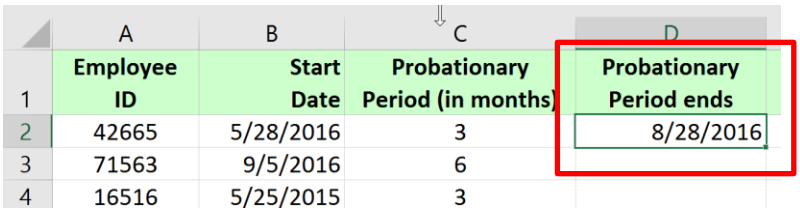


EDATE

The EDATE Function returns a date that is a specified number of months before or after a supplied start date. Example: New employees are on a probationary period for a predetermined number of months. The probationary period length varies according to each job. Use EDate to figure out the end date of the probationary period.

From the Formulas Tab >> Date & Time, select EDATE. Select the start date (this date should be in your worksheet) and select the number of months (this date can be entered in manually as well). Click OK.



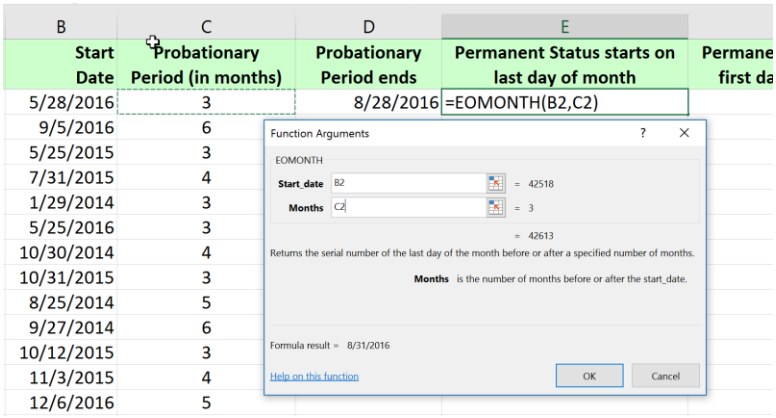


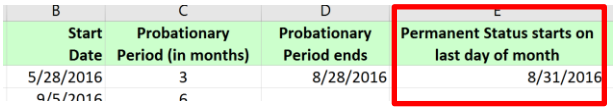
EOMONTH

Returns a date that is the last day of the month which is a specified number of months before or after an initial supplied start date.

Example: New employees are on a probationary period for a predetermined number of months and ends on the last day of the month. The probationary period length varies according to each job. Use EOMONTH to figure out the end date of the probationary period.

From the Formulas Tab >> Date & Time, select EOMONTH. Select the start date (this date should be in your worksheet) and select the number of months (this date can be entered manually as well). Click OK.





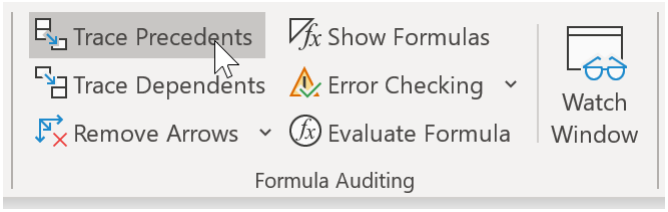
Troubleshooting Formulas

Trace Precedents and Dependents

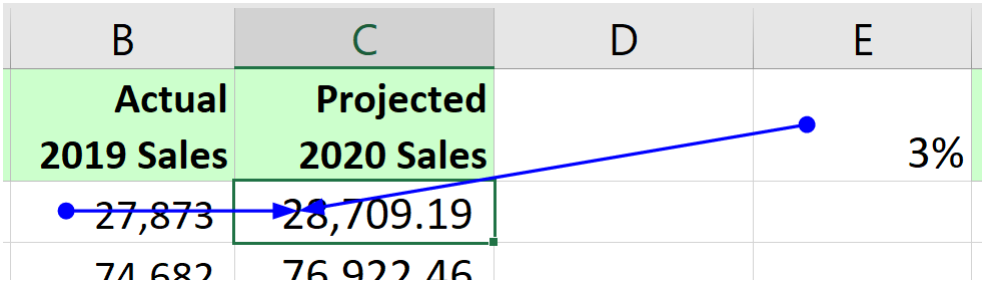
Trace Precedents

The Trace Precedents command is used to backtrack through all the cells that are used to calculate the current formula.

1. Formulas Tab >> Formula Auditing >> Trace Precedents

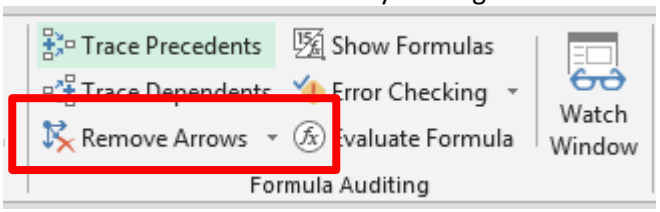


2. Results:



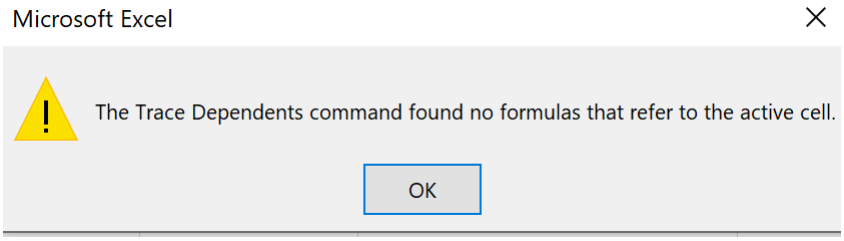
Each blue dot corresponds to a value used in the formula. An arrow points to the end value. If you click the Trace Precedents command again, any values that were used to calculate any precedent formulas are also highlighted. This means you can keep clicking Trace Precedents to go back multiple levels of precedents.

3. You can remove these arrows by clicking Remove Arrows in the Formula Auditing group:

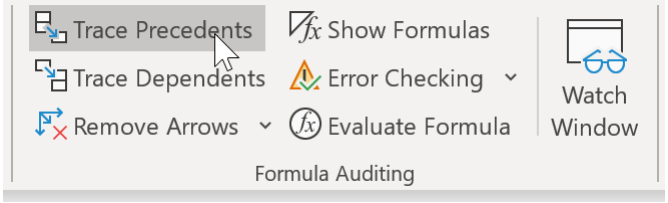


Trace Dependents

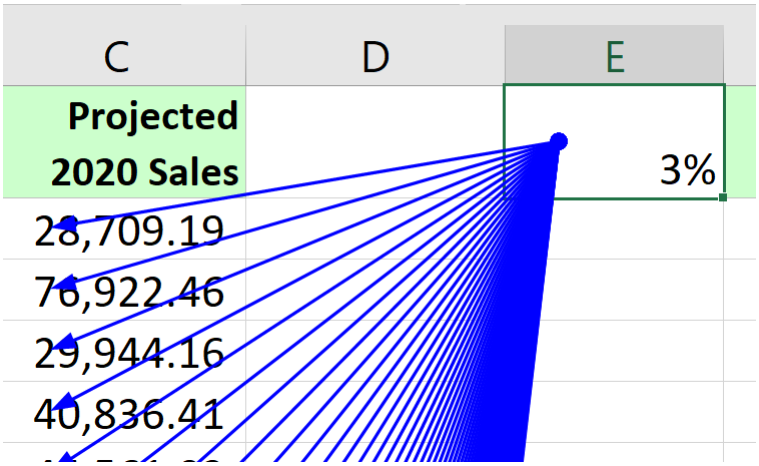
The Trace Dependents command works the opposite way of Trace Precedents: it highlights all the items that depend on the value in the current cell. Excel will alert you if you click this command when it doesn't apply:



1. Formulas Tab >> Formula Auditing Group >> Trace Dependents.



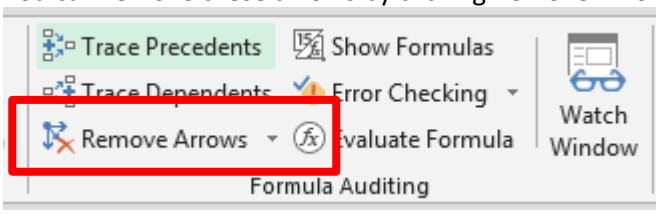
2. Results



This command can also be clicked multiple times to continue stepping through each level of dependency.

Remove Arrows

1. You can remove these arrows by clicking Remove Arrows in the Formula Auditing group:



Show Formulas

The Show Formulas command will show all the formulas in the worksheet rather than their computed value. This is a toggle command that also expands the column widths, so the formulas are easier to read:

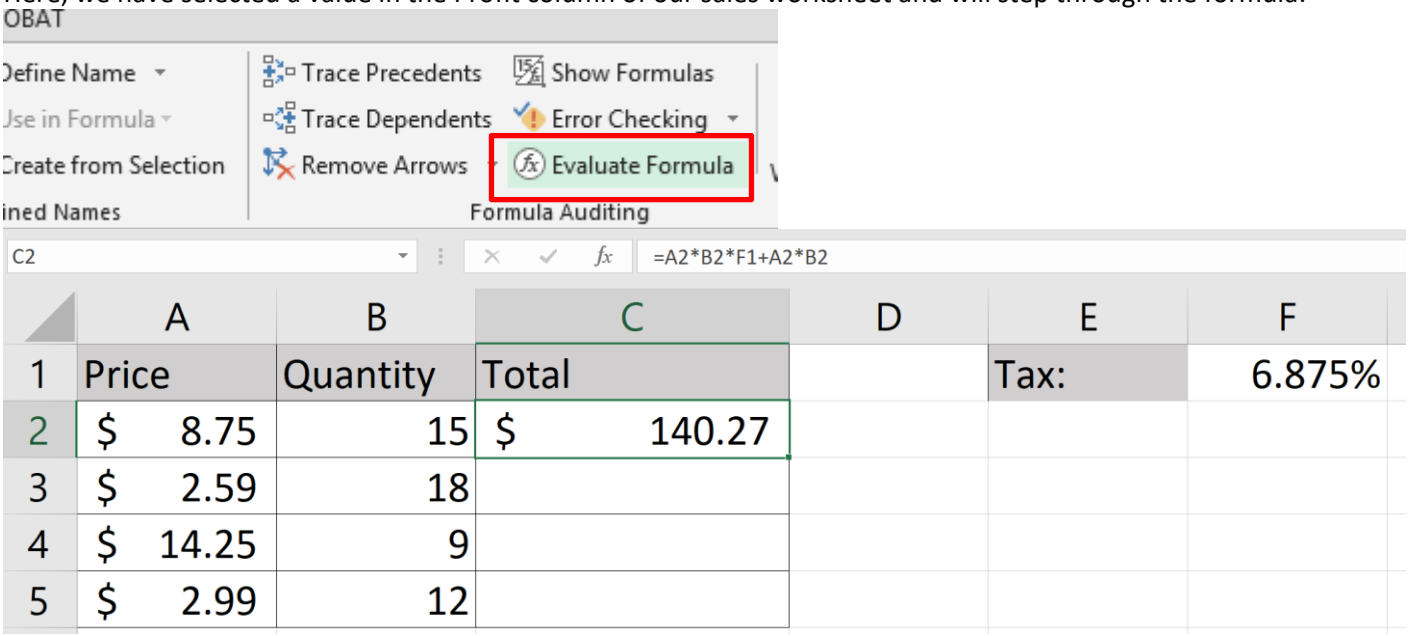
E	F
Job Rating	**Bonus**
1	=IF(E2>3,250,0)
4	=IF(E3>3,250,0)
3	=IF(E4>3,250,0)
2	=IF(E5>3,250,0)
4	=IF(E6>3,250,0)
5	=IF(E7>3,250,0)

This mode is very useful when you are creating formulas for a large sheet. You can ensure that the formulas are correct before adding or computing data. Viewing formulas also makes it easier for others to view your work and understand how values are calculated instead of clicking cells one at a time and looking at the formula bar.
Click this command again to show the calculated values. The columns will also return to their normal widths.

Evaluate Formula

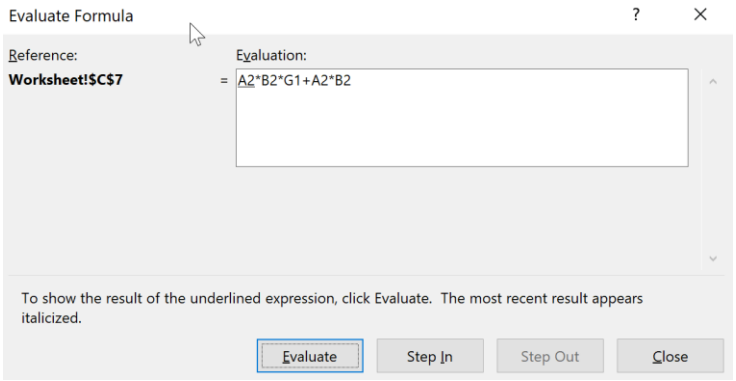
As we have seen by examining the other commands in this section, there are a number of commands you can use to easily and accurately track what a formula is doing. The Evaluate Formula command takes this concept one step further by showing you **every single calculation** that was used to reach a particular value. This command is extremely useful for making sure a complex formula is doing exactly what you intend it to do, or for finding that one small piece that is causing your calculation to fail along the way.

Here, we have selected a value in the Profit column of our sales worksheet and will step through the formula:

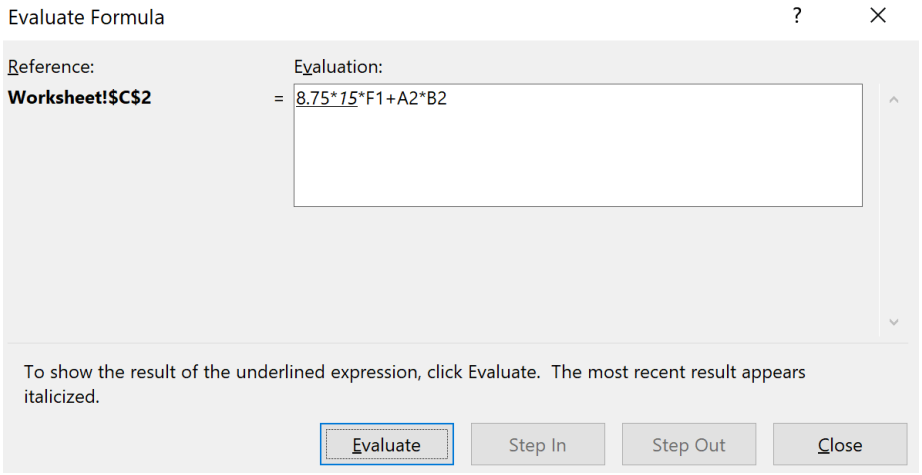


	A	B	C	D	E	F
1	Price	Quantity	Total		Tax:	6.875%
2	$ 8.75	15	$ 140.27			
3	$ 2.59	18				
4	$ 14.25	9				
5	$ 2.99	12				

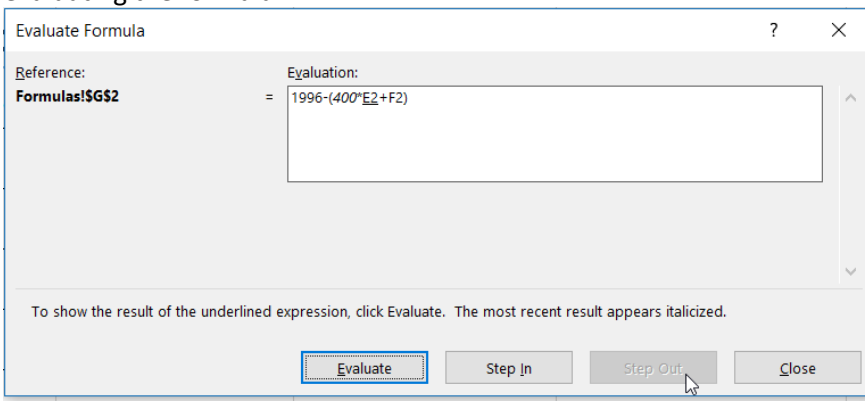
The Evaluate Formula dialog box will appear and show the formula that will be evaluated:



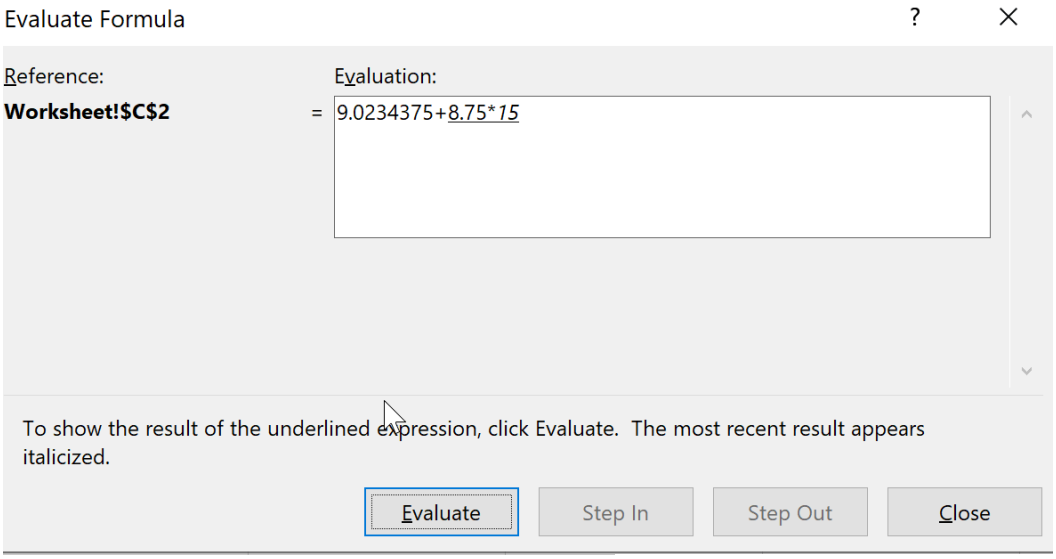
Click Evaluate to step into the first part of the formula. It turns the first reference into the number.

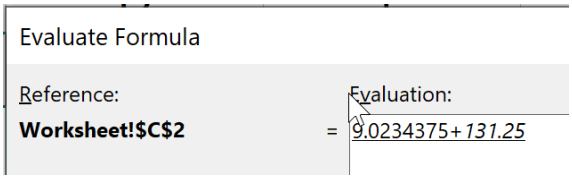


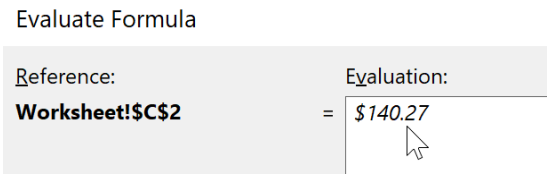
Now, the next value is highlighted and the option to Step In is available again. Click Evaluate to continue checking and evaluating the formula:



Eventually, the checker will step through all the calculations one at a time before showing you the final step:





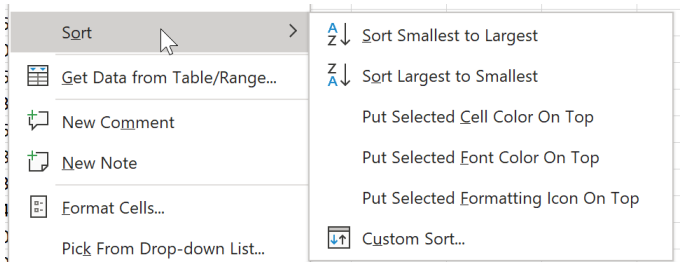


Clicking Evaluate once more will perform the final calculation and show the result. Clicking Evaluate a final time will start the process over from the beginning.

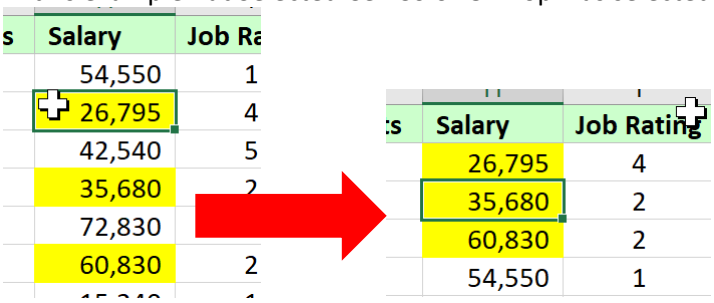
List Management

Sort by Values, Cell Color, Font Color, Cell Icons

1) If several cells in a list have a specific cell color, font color, etc. you can right mouse click >> Sort and select from the list.

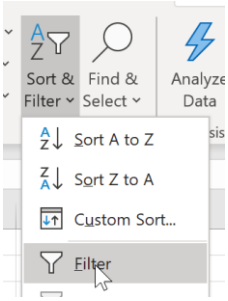


2) In this example Put Selected Cell Color On Top was selected.

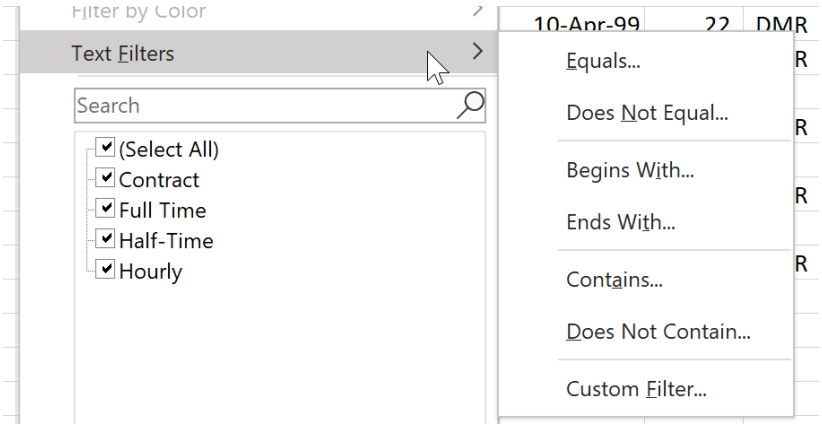


NUMBER, TEXT, AND DATE FILTERS

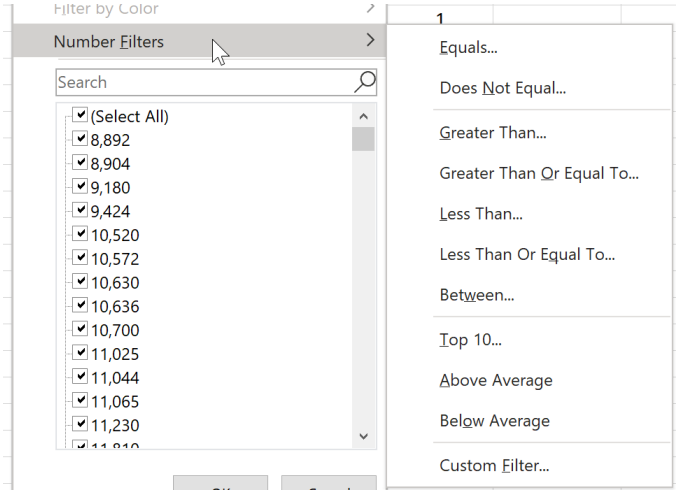
1) You can use AutoFilter (Home Tab >> Editing Group >> Sort & Filter



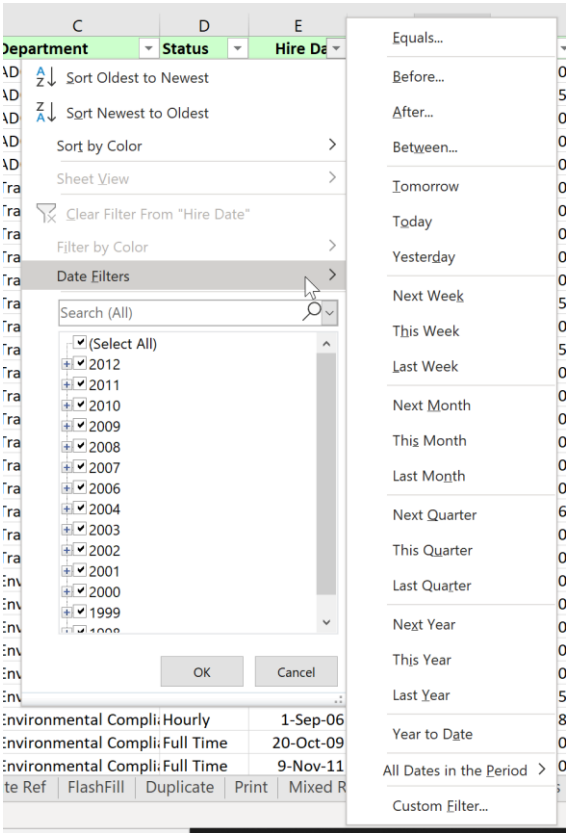
2) Each filter dropdown contains content specific filters.
   a. Text Filters



   b. Number Filters

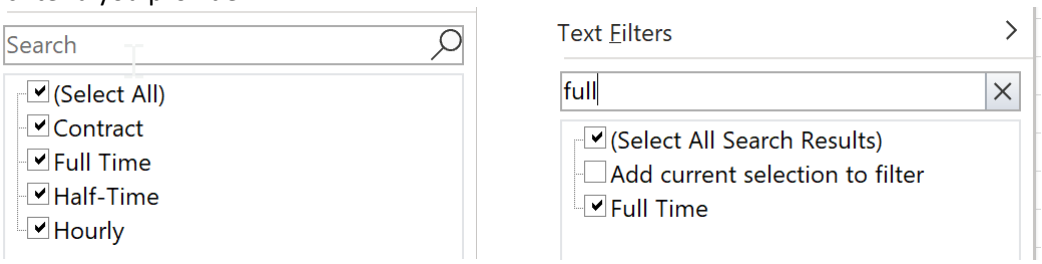


c. Date Filters



SEARCH CRITERIA

1) You can type in specific search criteria in the Search Text box. Items will be automatically selected based on the criteria you provide.



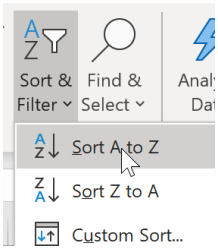
2) You can also use the select checkmarks to select the criteria you want to filter.

CREATE SUBTOTALS

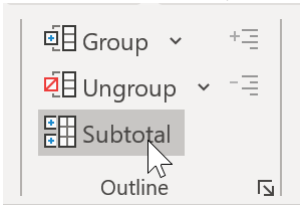
1) The first step in creating subtotals is to sort by the field you want the subtotals grouped by. In this example we have sorted by Status and will have subtotals add up the amount of salary in each Status group: Full, Half-Time, Contract, Hourly.

	A	B	C	D	E	F	G	H	I
	Employee Name	**Building**	**Department**	**Status**	**Hire Date**	**Years**	**Benefits**	**Salary**	**Job Rating**
2	Dawson, Jonathan	West	ADC	Contract	6-Mar-07	14		42,540	5
3	Spencer, Boyd	Main	Training	Contract	17-Apr-07	14		66,580	5
4	Rowe, Ken	West	Training	Contract	8-Sep-00	20		76,690	3
5	Phelps, Gretchen	South	Environmental Compli	Contract	26-Nov-10	10		58,130	2
6	Wheeler, Meegan	West	Facilities/Engineering	Contract	12-Jan-07	14		83,020	4

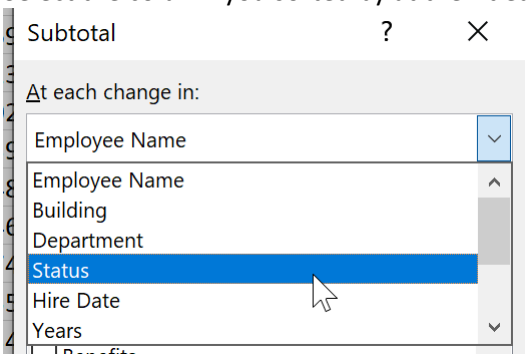
To sort, click in one cell in the column you wish to sort the entire list >> Home Tab >> Editing Group >> Sort and Filter >> Sort and Filter.



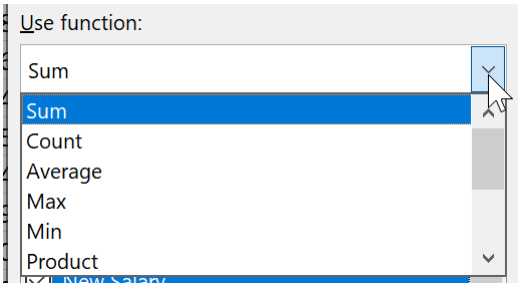
2) To insert Subtotals, Data Tab >> Outline Group >> Subtotal



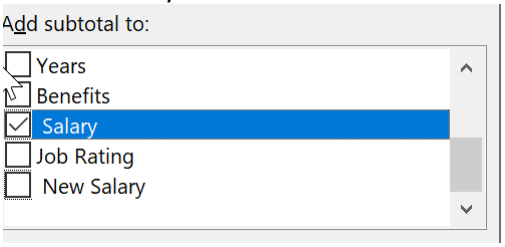
3) Select the column you sorted by at the At each change in: dropdown. Here we will select Status.



4) We will select Sum in the Use Function: dropdown. Notice you can find average, max, min, etc., as well.

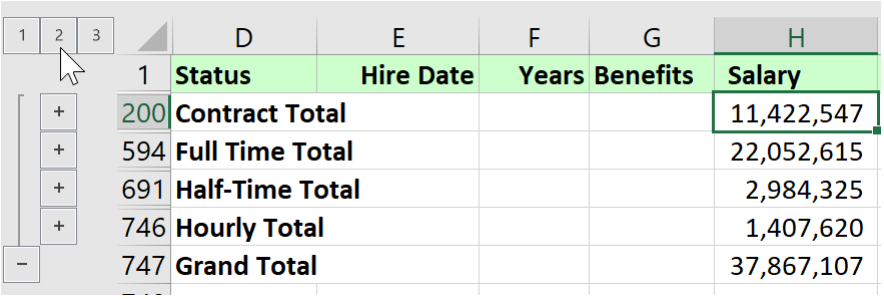


5) Select where you want to add the subtotal.



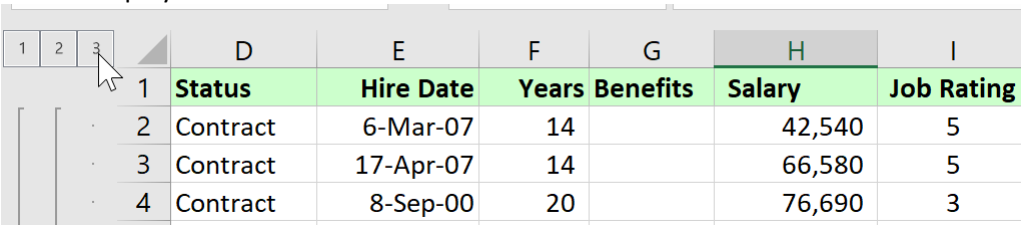
6) You will now have outline levels you can click on the right-hand side of the data.
Level 1 will display the Grant Total.

7) Level 2 displays subtotals and the grand total.



	D	E	F	G	H
1	**Status**	**Hire Date**	**Years**	**Benefits**	**Salary**
200	**Contract Total**				11,422,547
594	**Full Time Total**				22,052,615
691	**Half-Time Total**				2,984,325
746	**Hourly Total**				1,407,620
747	**Grand Total**				37,867,107

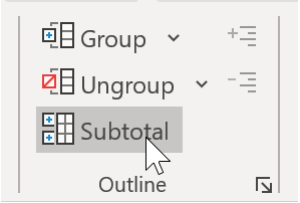
8) Level 3 displays all data.



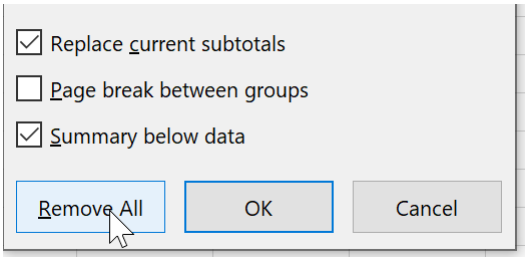
	D	E	F	G	H	I
1	**Status**	**Hire Date**	**Years**	**Benefits**	**Salary**	**Job Rating**
2	Contract	6-Mar-07	14		42,540	5
3	Contract	17-Apr-07	14		66,580	5
4	Contract	8-Sep-00	20		76,690	3

REMOVE SUBTOTALS

1) Data Tab >> Outline Group >> Subtotal



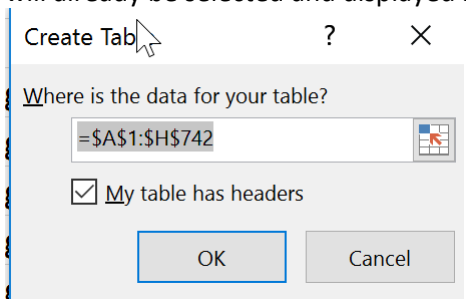
2) Remove All



Creating a Table

There are two ways to create a table. You can either insert a table directly in the default table style or you can convert an existing range into a table. The second approach is by far the most common:

1. On a worksheet, click anywhere in your list of information.
2. On the **Home** tab, within the Styles group, select **Format at Table.**
3. A **Create Table** dialog box will appear. Your selected range appears as an absolute cell reference. Your range will already be selected and displayed in the **Where is the data for your table?**

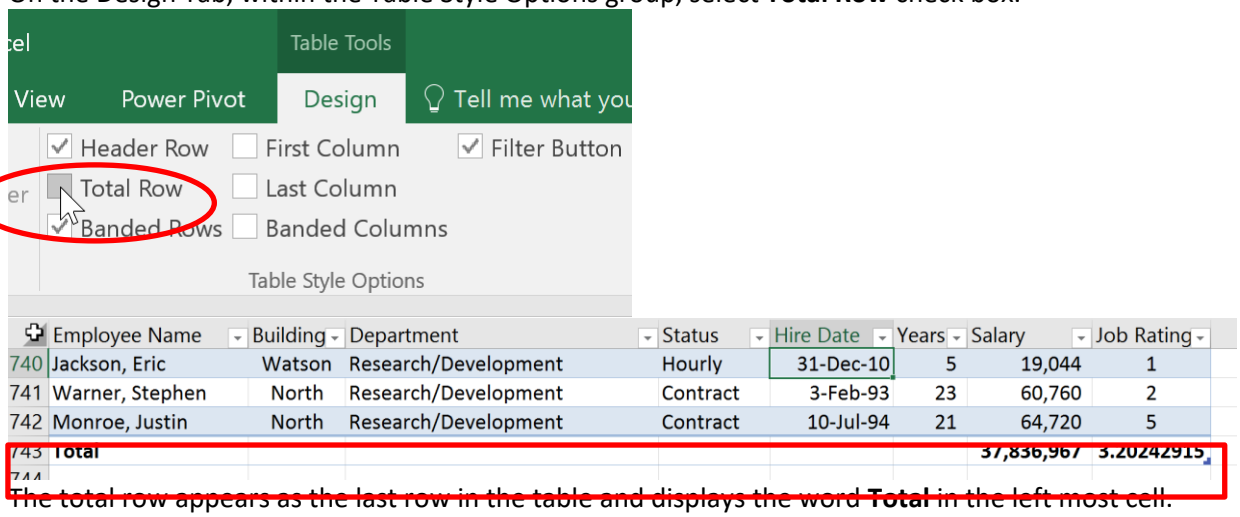


4. If your selected range contains data that you want to display as table headers, select the **My table has headers** check box.
5. Click the **OK** command button to create the table.
6. When you have an Excel table selected, you will have access to a **Table Tools** contextual tab with a single **Design** sub-tab.

Each time you create a table, Excel creates a default table name in the Properties group (e.g., Table1, Table2, etc.). The scope of the table name is for the entire workbook.

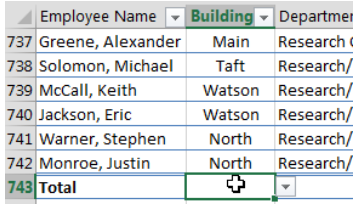
Add a Total Row

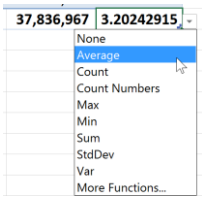
1. Click anywhere in the table
2. On the Design Tab, within the Table Style Options group, select **Total Row** check box.



The total row appears as the last row in the table and displays the word **Total** in the left most cell.

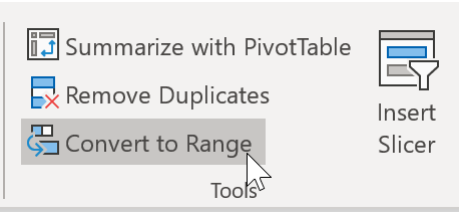
3. In the total row, click the cell in the column for which you want to calculate a total, and then click the dropdown that appears.
4. In the dropdown list, select the function that you want to use to calculate the total.



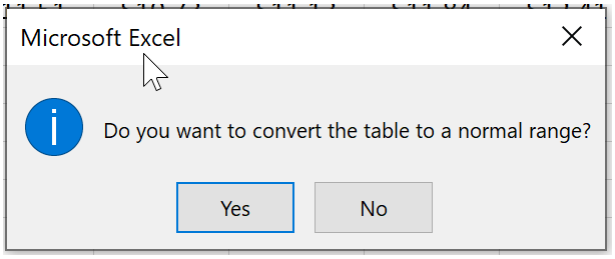


CONVERT TO NORMAL RANGE

1) Click with in the table.
2) Table Design Tab >> Tools Group >> Convert to Range

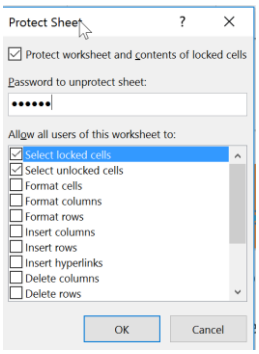


3) Click Yes to confirm.



4) Any formatting will stay.

Protecting / Unprotecting Worksheets



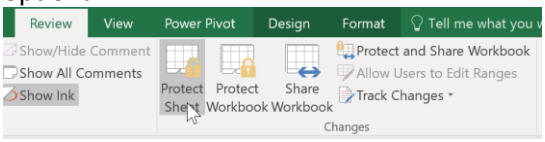
Protecting a worksheet prevents editing of cells (unless they are unlocked) and can also prevent other commands from being used.

Cell Formatting

We first unlock the cells we want users to be able to change.

1) Select the cell(s) >> Right mouse click >> Cell Format
2) Protection Tab >> Deselect the Locked checkmark.

1. Turn on protection by choosing Review >> Protect sheet. Select specific actions to permit. A password is optional.



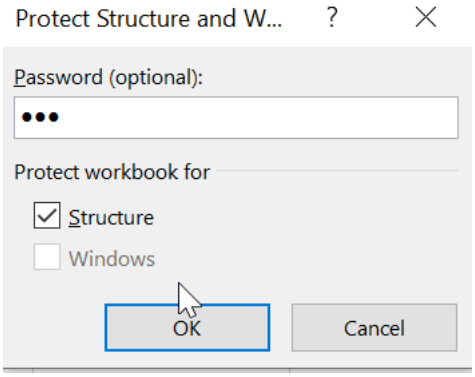
2. To unprotect, choose Review >> Unprotect Sheet. Enter the password if prompted

PASSWORD PROTECT WORKBOOK

This will protect users from deleting, moving, renaming worksheet tabs.

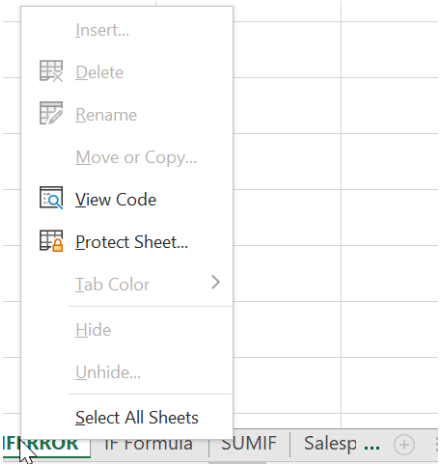
1. Review Tab >> Protect Workbook.

2. Enter in your password. Click OK



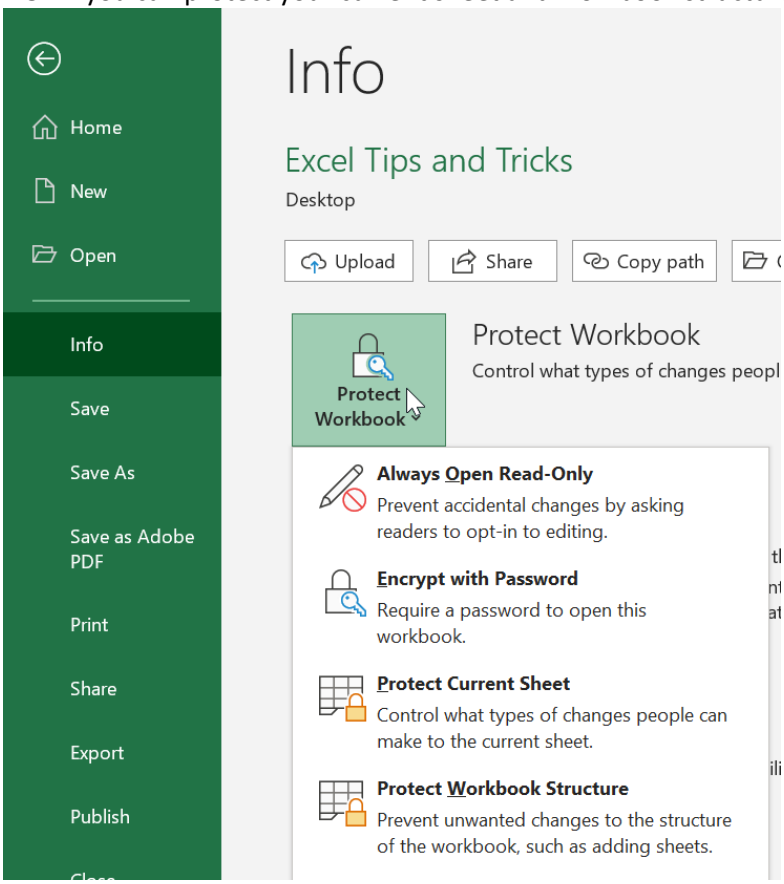
3. Confirm your Password. Click OK.

4. Users will not be able to create new worksheets, add, rename, hide/unhide worksheets.

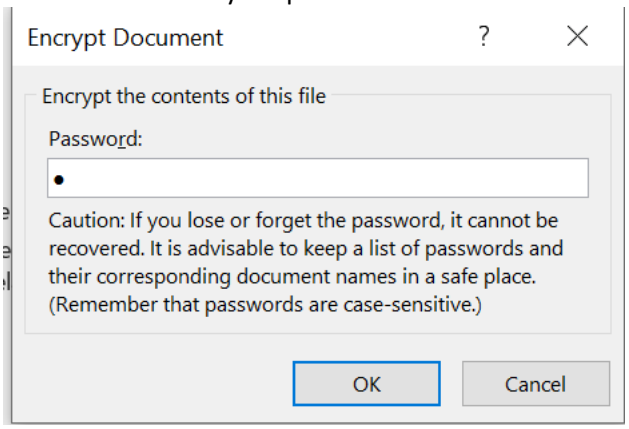


PASSWORD PROTECT YOUR ENTIRE FILE

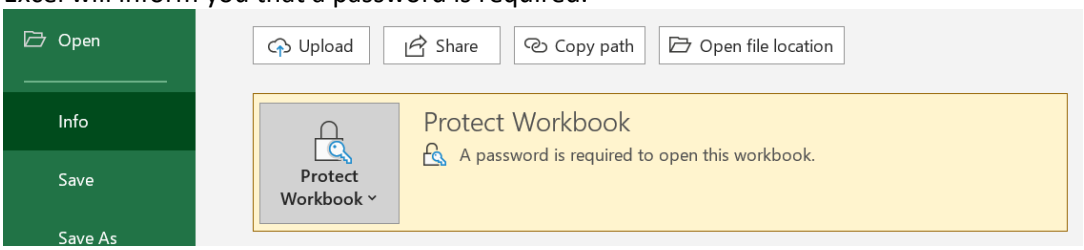
1. Click the File Tab >> Info >> Encrypt with Password.
   NOTE: you can protect your current sheet and workbook structure here as well.



2. Enter and confirm your password.

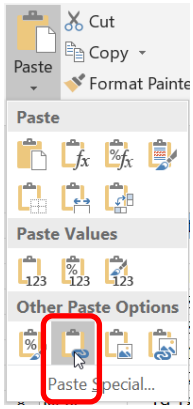


3. Excel will inform you that a password is required.



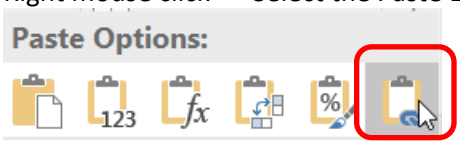
Linking Data

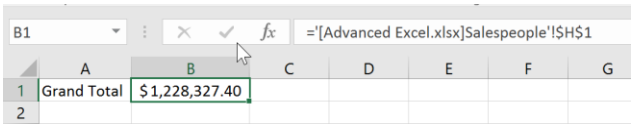
Linking allows data stored on a worksheet to be referenced by another worksheet. This can be within the same workbook, or in separate workbooks.



Linking worksheets

1. Open the file containing worksheets that you want to link together.
2. Copy the cell you wish to link to another worksheet.
3. Switch to that worksheet and select the desired cell.
4. Right mouse click >> Select the Paste Link option.



5. 

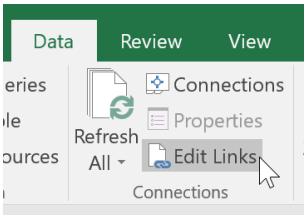
If the data is changed for a source cell, it is automatically updated in the destination cell, provided the changes to the source are saved.

Edit Links

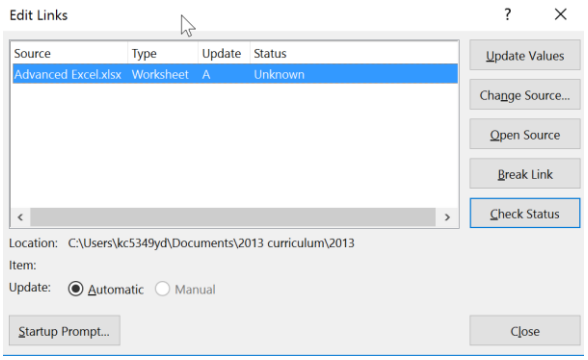
One file could be linked to one or more other files through formulae. During the course of time, as these workbooks get updated / changed, there could be a need to change the links in these workbooks. Changing the source link allows the user to change the location of the source where the data exists or to change the link to a new workbook altogether.

To change the source link, you must use the "Edit Links" option. This option gives the user a view of all the other files the current file is linked to, so that the user can update or remove the links.

1. From the Data Tab select Edit Links.



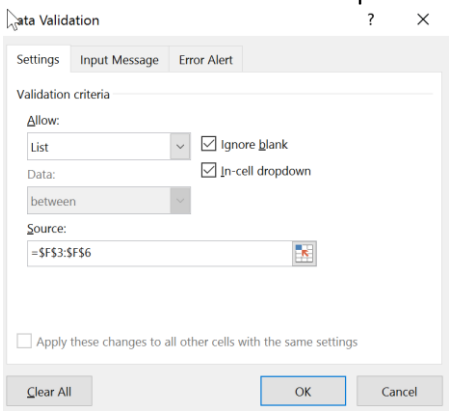
2. This window allows you to Change the source, open the source, break the link, or check the status.

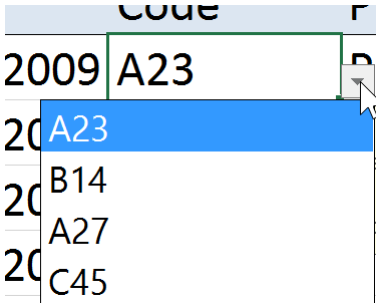


Data Validation

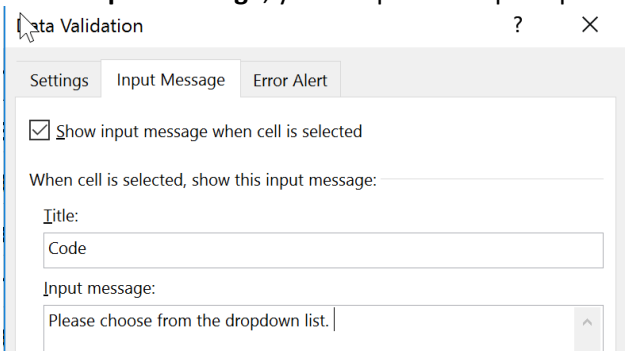
To limit entry to a list of values:

1. Ahead of time, enter the possible values on the same worksheet but far away from anywhere that will contain values or be subjected to possible deletion.
2. Click in the cell(s) where you want to control what gets entered.
3. Select Data ribbon > Data Tools group > Data Validation
4. On the **Settings** tab, select **List** under **Allow:**
5. Enter or select the source for possible responses.





6. Under **Input Message**, you can provide a prompt to assist during data entry:

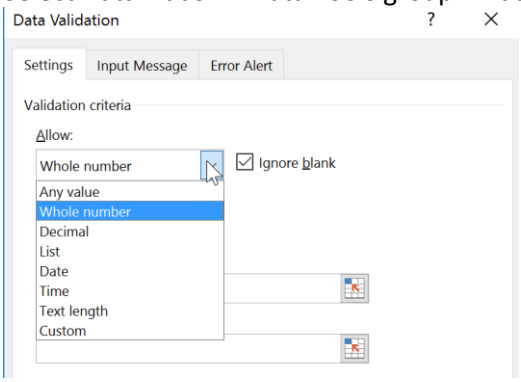


7. Under **Error Alert**, you can provide remedial support to encourage the correct selection. You can also choose to make the error only a warning instead of refusing to take their value.
8. Click on **OK** to finalize your choices.

To restrict entry to other specific types:

At times it is useful to set cells to only accept certain kinds of information. These are things such as whole numbers, decimals, and dates.

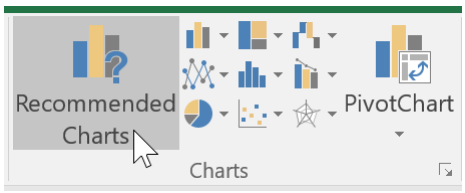
1. Click in the cell(s) where you want to control what gets entered
2. Select Data ribbon > Data Tools group > Data Validation



Charting Tools

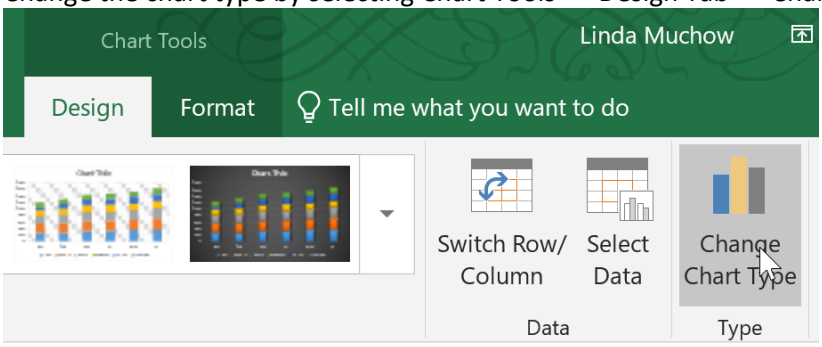
1. Insert Tab >> Charts group >> select a chart (Line, Pie, Bar).

2. Excel offers a Recommended Charts tool. The way this works is very intuitive and is based on the data you have selected. For instance, a table with a simple layout of two rows and four columns will result in a suggestion of a simple chart such as a line chart. However, you can always choose a different chart if you don't like the results.

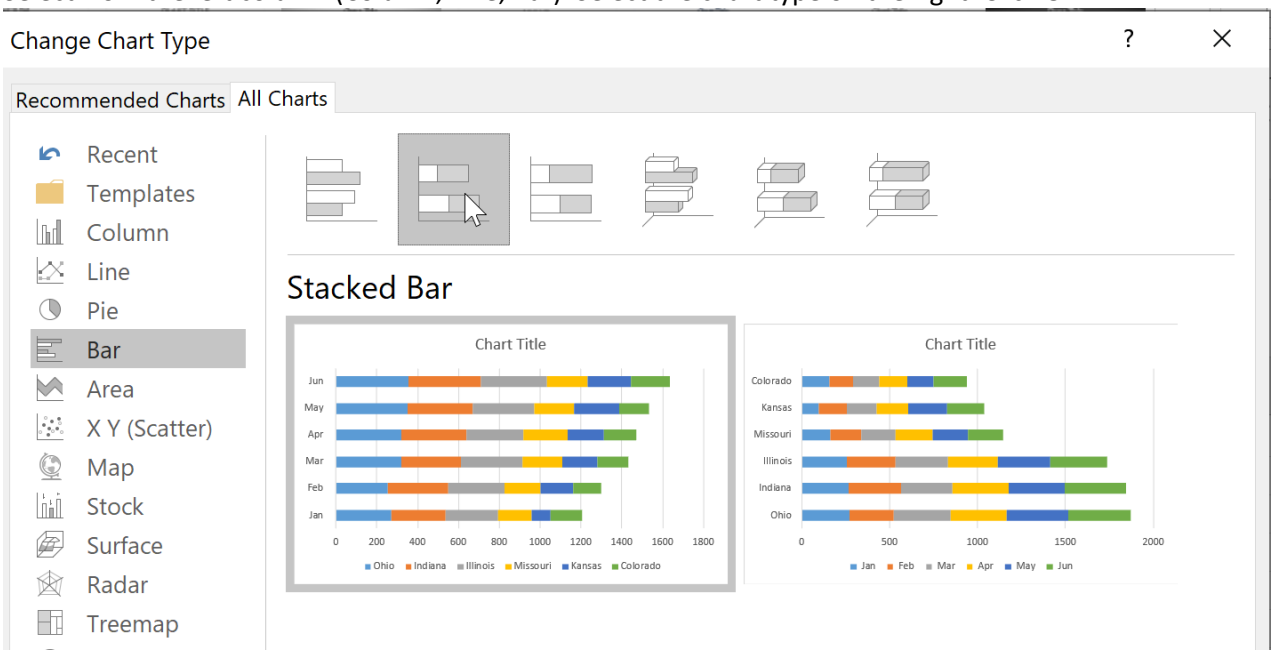


Recommended charts are available from the INSERT >> Charts Group >> Recommended Charts.

3. Change the chart type by selecting Chart Tools >> Design Tab >> Change Chart type.



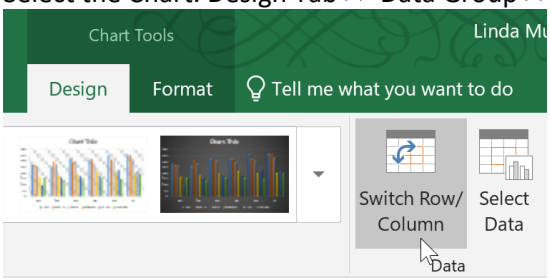
4. Select from the left column (Column, Line, Bar). Select the chart type on the right. Click OK.

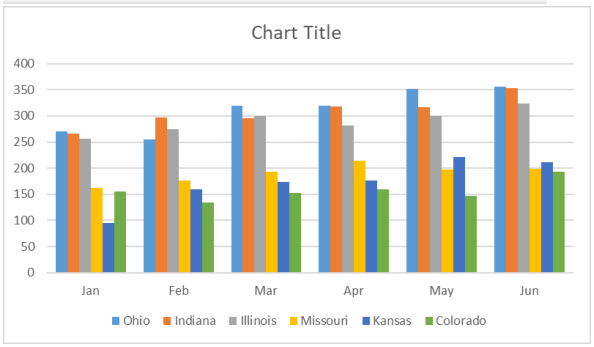


Switch Row/Column

If you want to switch the Legend and the Axis information, use Switch Row/Column.

1. Select the Chart. Design Tab >> Data Group >> Switch Row/Column





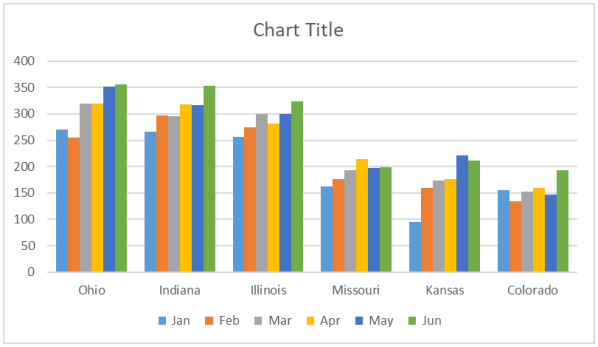


Chart Elements

Use chart elements to move the Legend, add Data Labels and customize your chart axis.

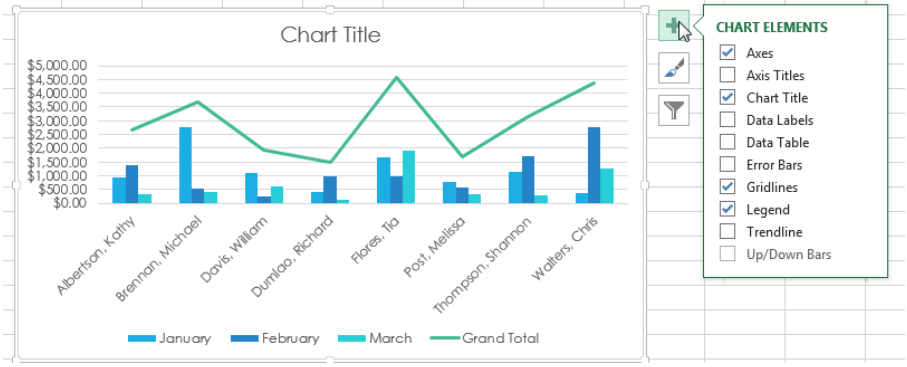


Chart Style

Chart Styles allows you to change the style and colors of your chart.

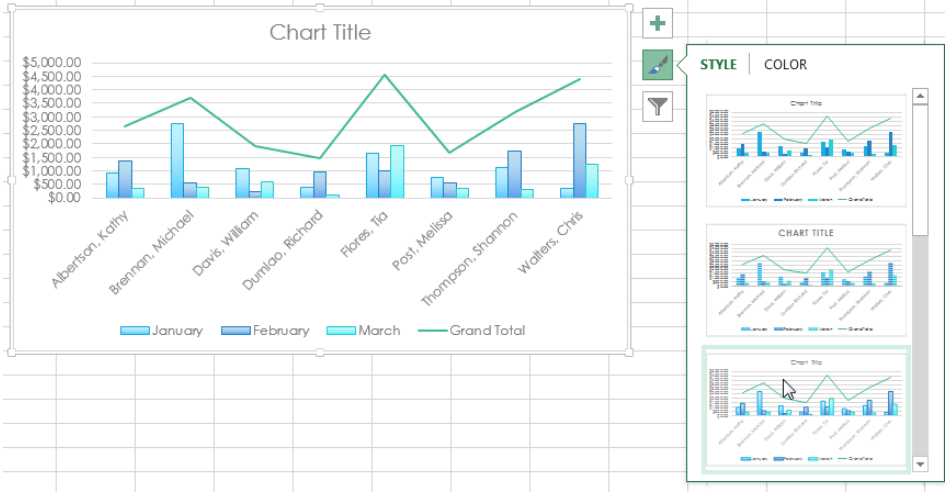
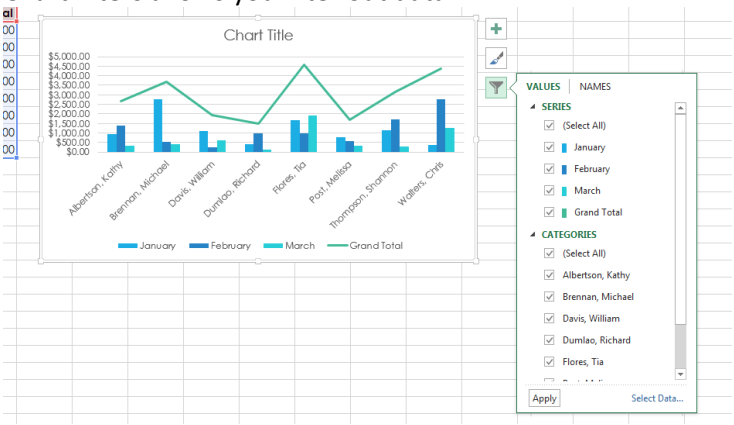


Chart Filter

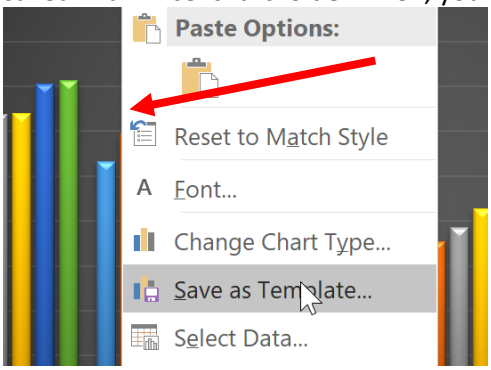
Chart filters allows you filter out data.

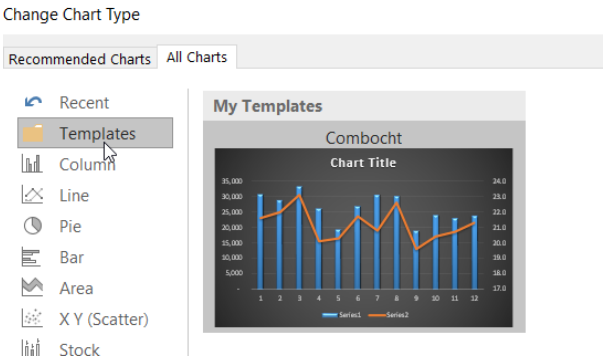


SAVING A CHART AS A TEMPLATE

Once you get your chart looking just the way you like it, you can save the chart type, colors, and formatting as a template that can be reused to make on future charts.

To save this chart as a template, right mouse click the chart (either in the plot area or chart area) and choose Save as Template. This will display a Save Chart Template dialogue box; it's virtually identical to the regular Save dialog. Just enter an appropriate name for your chart template and then click the Save button. By default, the templates will be saved in an Excel chart folder. Then, you can apply the template right away by selecting it from the Templates folder.



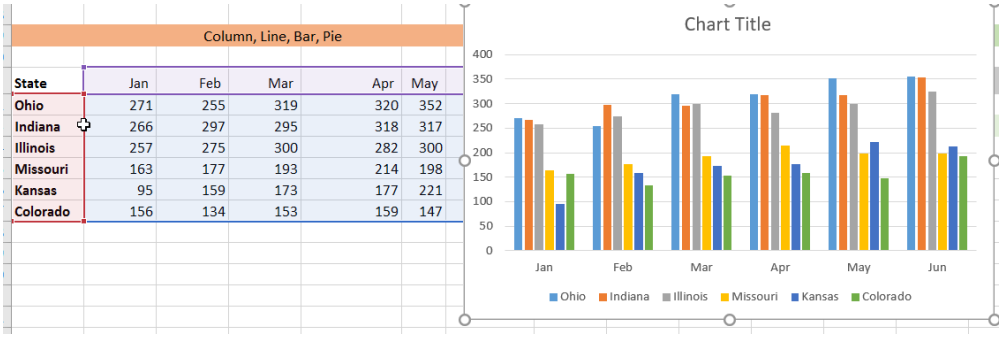


If you select Templates in the pane on the left of the box, you will see the chart template that you saved displayed on the right side. Just click the template icon to apply the template to the selected data.

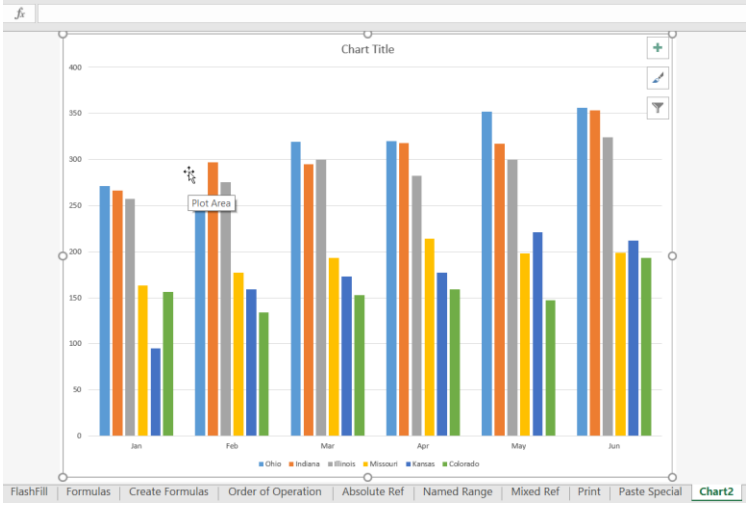
CREATE CHARTS WITH KEYBOARD SHORTCUTS

You can quickly add charts to your workbook using two different keyboard shortcuts.

1. To add a chart into the worksheet that is currently active, select the data you wish to chart and press Alt + F1.



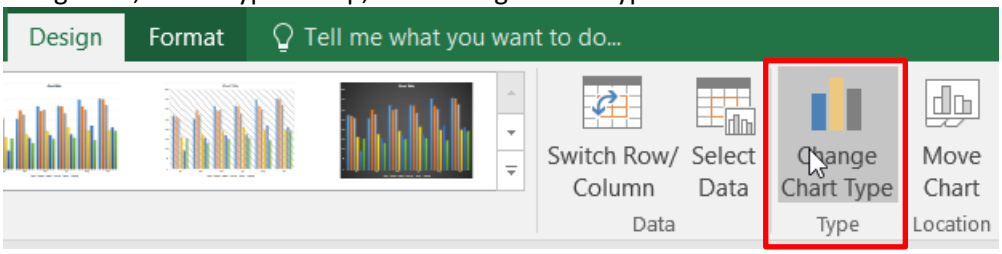
2. To insert a chart into a new worksheet in your workbook, select the data you wish to chart and press the F11 key. This chart your data and place in a worksheet of its own.



Change the Default Chart Type

You can change the default chart type that is inserted into your worksheets.

1. Open the Change Chart Type dialog box by inserting a chart. Then, from the Chart Tools Ribbon Option, on the Design Tab, in the Type Group, click Change Chart Type.

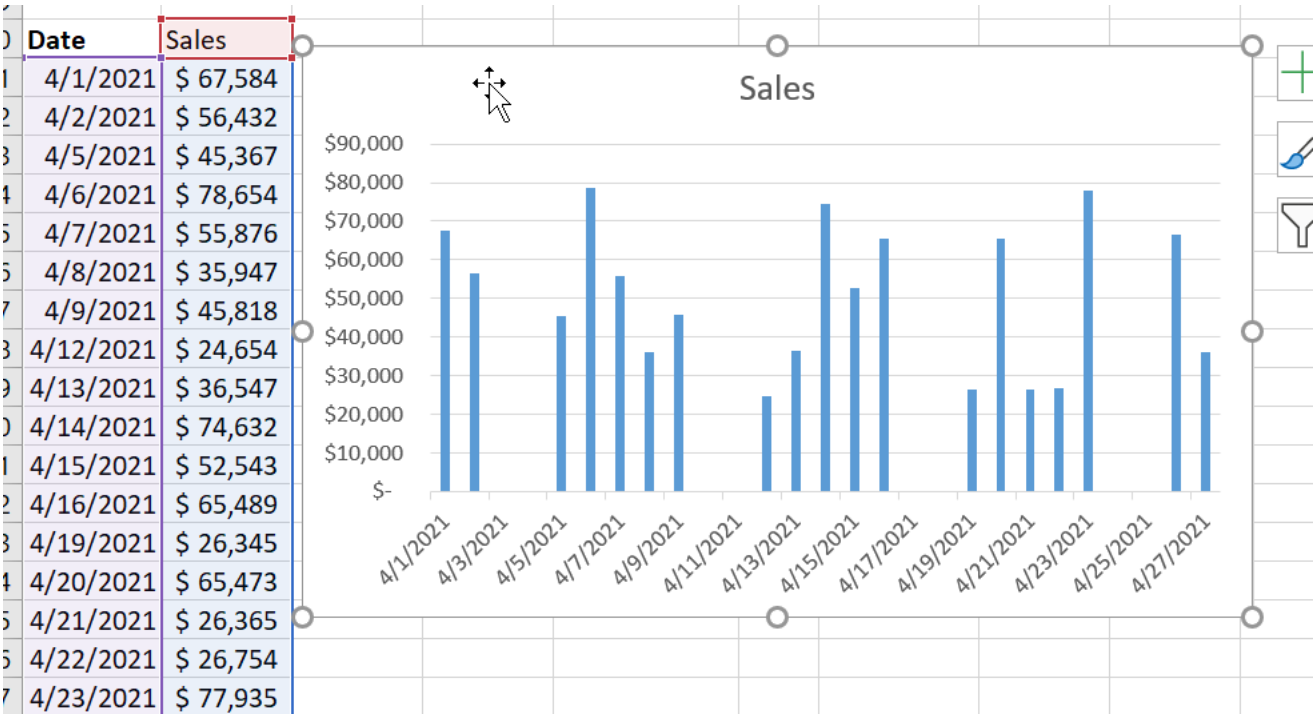


2. In the Change Chart Type dialog box, right mouse click the chart you wish to set as your default. Select Set as Default Chart.

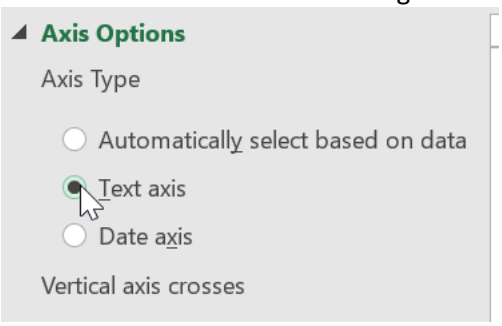
3. Click OK.

Dates

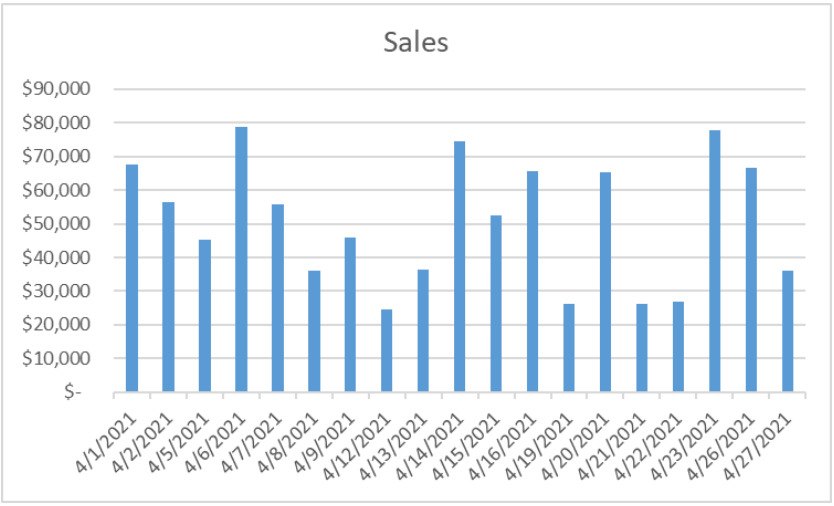
Excel will choose how it charts dates. If you want each date to show up on your chart you must change the Axis option to Text.



1. Double click the Date Axis. Change the Axis option to Text axis.



2. Results:



Use a Table to Create a Chart

Format your source data as a table, then create a chart based on that table. When you add more data below the table, it will automatically be included in both the table and the chart, keeping everything consistent and up to date.