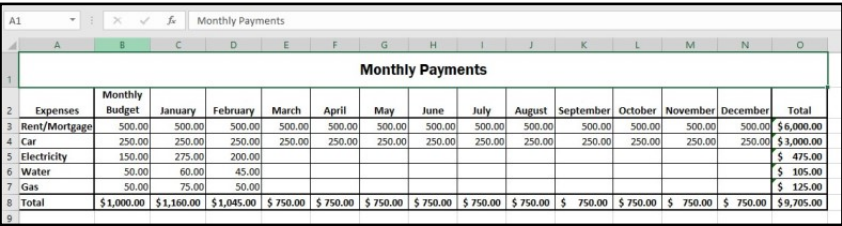




INTERMEDIATE EXCEL

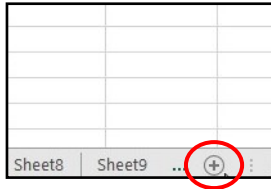


The screenshot shows an Excel spreadsheet with the title 'Monthly Payments'. The table has columns for 'Expenses', 'Monthly Budget', and months from 'January' to 'December', plus a 'Total' column. The data is as follows:

Expenses	Monthly Budget	January	February	March	April	May	June	July	August	September	October	November	December	Total
Rent/Mortgage	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	500.00	\$6,000.00
Car	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	250.00	\$3,000.00
Electricity	150.00	275.00	200.00											\$ 475.00
Water	50.00	60.00	45.00											\$ 105.00
Gas	50.00	75.00	50.00											\$ 125.00
Total	\$1,000.00	\$1,160.00	\$1,045.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$ 750.00	\$8,705.00

While its primary function is to be a “number cruncher”, Excel is a versatile program that is used in a variety of ways. Because it easily organizes, manages, and displays information, you will be able to quickly find helpful information and draw conclusions.

ADD AND NAME WORKSHEETS



To add a new worksheet:

- Click the circled plus sign (+) to the right of the last worksheet.

To rename a worksheet:

- Double click the sheet tab to highlight the current name, then type the new name. Press Enter.

OR

- Right click the sheet tab. Select Rename from the menu, then type the new name. Press Enter.

Notes

SELECT WORKSHEETS

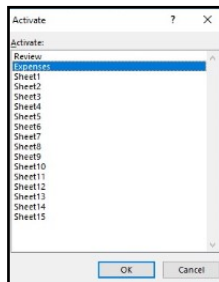


To select a worksheet:

- Click a visible sheet tab.

If the worksheet tab is not visible:

- Use the navigation arrows to the left of the first worksheet tab. However, this just takes you to the sheet. Click the tab when it becomes visible to see the worksheet's contents.



If you have a workbook with many worksheets, use a third option:

- Right click the navigation arrows to get a list of all sheets in the workbook. Select the sheet you need and it will automatically open.

ADD DATA TO A SPREADSHEET

Think of Excel as having “layers” that you work with.

- The first layer is the worksheet grid.
- The second layer becomes evident when you type data in a cell. The insertion point keeps blinking until you set your “typing layer” into the cell by pressing Enter, Tab, or an arrow key.
- When you enter numbers, only type the numbers, not the commas or dollar signs that you might want. “Apply formatting” to a spreadsheet is yet another “layer” you’ll add by using the Ribbon buttons.

Tip: If ##### appears in a cell, the cell is not big enough to show all of the data. Expand the size of the cell to have the information appear.

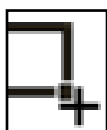
Notes

MOUSE POINTERS

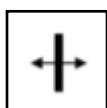
The appearance of the mouse pointer in Excel is crucial. The following list explains how the mouse might look and what it does.



Normal or **Select** pointer – This cursor, shaped like a white cross with a black border, allows you to select a cell or group of cells.



Autofill pointer – As you hover the mouse over the fill handle, the mouse pointer becomes a black plus sign. Use this cursor to copy formulas or complete number patterns.



Resizing pointer – Shaped like a plus sign, it only appears when the mouse hovers over the boundary line between two column letters or two row numbers. Arrows on the pointer indicate the direction the boundary line can be dragged.



Move pointer – The plus sign with arrows pointing in all directions is used to drag data from one location to another.



Arrow pointer – Appears when the mouse hovers over a column letter or a row number. Click the mouse to select row(s) or column(s).

WRITE A BASIC FORMULA

Although Excel can perform complex math calculations, writing simple math equations is often all that's needed.

To write a formula, remember these 4 rules:

- **All formulas must begin with an equals sign.** Without the equals sign, Excel understands what has been entered to be text.
- **Use cell references whenever possible.** Using cell references allows the cell contents to be edited without your needing to also edit the formula.
- **Use a math operator.** Basic formulas simply add (+), subtract (-), multiply (*), or divide (/). Use the numeric keypad for the easiest way to type these operators.
- **No spaces when you type.** If you add spaces in a formula, Excel makes that edit for you and removes them.

Notes

EXCEL FUNCTIONS

Some formulas are complicated to write, even though they use basic math. For example, adding either a row or a column of numbers where many cells are included is difficult to write accurately.

Functions have the following pattern:

=function(*argument*)

To write a function, remember these 4 rules:

- **All functions must begin with an equals sign.** Without the equals sign, Excel understands what has been entered to be text.
- **Use cell references whenever possible.** Using cell references allows the cell contents to be edited without your needing to also edit the formula.
- **Functions are named using math terminology.** For a total of numbers, use the =SUM() function.
- **No spaces when you type.** If you add spaces in a formula, Excel makes that edit for you and removes them.

AUTOSUM

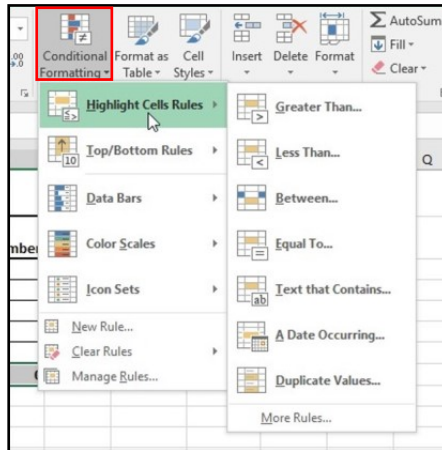
Because many spreadsheets require totals of rows and columns, Excel provides a special button—AutoSum.



To use the **AutoSum** button:

1. Click in the cell where the answer will be located.
2. Click the **AutoSum** button.
3. Excel suggests a range of cells.
4. **Be careful!** The suggested range of cells may need to be edited.
5. Use the formula bar to edit the formula, if needed.
6. Use the checkmark button to enter the formula into the cell.
7. If the formula needs to be copied to adjacent (contiguous) cells, use the fill handle.

CONDITIONAL FORMATTING



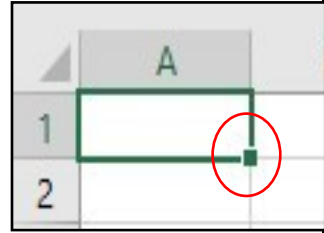
Use **Conditional Formatting** to make specific cells more visible.

The two options most likely to be used are Highlight Cells Rules and Top/Bottom Rules.

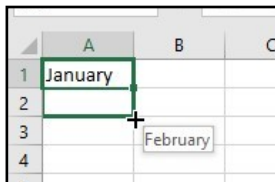
- **Highlight Cells Rules:** Color code a cell's font and/or background color by comparing the cell's contents to a value: Greater than, Less than, Between, Equal to, Text that Contains, A Date Occurring, Duplicate Values.
- **Top/Bottom Rules:** Color code the cells with contents that contain the top 10 values or are in the top 10%, the bottom 10 values or bottom 10%, above average or below average. Although the option name states "10", the number of answers you want to see can be edited.

THE FILL HANDLE

The fill handle is the little square in the lower right of an active cell. Use it to copy dates, patterns, or formulas to contiguous (next to each other) cells.



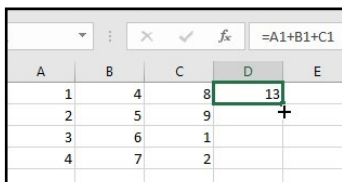
To complete listing a series of days/months to adjacent cells:



1. Enter the first day/month (either the complete spelling or abbreviated).
2. Click the checkmark button to stay in the same cell.
3. Hover the mouse over the fill handle until the cursor becomes a thin plus sign.
4. Click and drag the mouse to finish the list.

THE FILL HANDLE

To copy a formula to adjacent cells:

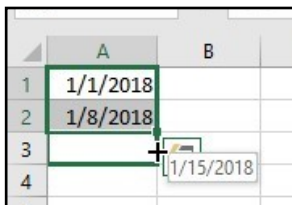


The screenshot shows an Excel spreadsheet with columns A through E and rows 1 through 4. The formula bar at the top displays $=A1+B1+C1$. In cell D1, the value 13 is shown. A thin plus sign cursor is visible over the bottom-right corner of cell D1, indicating the fill handle is being used to copy the formula to adjacent cells.

	A	B	C	D	E
1		4	8	13	
2		5	9		
3		6	1		
4		7	2		

1. Enter the first formula.
2. Click the checkmark button to stay in the same cell.
3. Hover the mouse over the fill handle until the cursor becomes a thin plus sign.
4. Click and drag the mouse to copy the formula.

To copy a pattern of dates or numbers:



The screenshot shows an Excel spreadsheet with columns A and B and rows 1 through 4. Cells A1 and A2 contain the dates 1/1/2018 and 1/8/2018 respectively. A thin plus sign cursor is visible over the bottom-right corner of cell A2, indicating the fill handle is being used to copy the pattern to adjacent cells. Cell B3 shows the date 1/15/2018, which is the result of copying the pattern.

	A	B
1	1/1/2018	
2	1/8/2018	
3		1/15/2018
4		

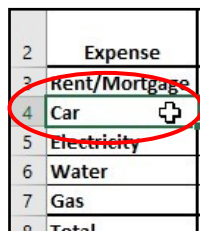
1. Enter the first two dates/numbers of the pattern in the first two cells to establish the pattern.
2. Select the two cells.
3. Hover the mouse over the fill handle until the cursor becomes a thin plus sign.
4. Click and drag the mouse to continue the pattern.

SORT A LIST

To place records in alphabetical or numeric order, sort the list by the column that creates the order you need. For example, you might want to sort by last name or by zip code.

If the list doesn't have a row for totals or other calculations, you should be able to:

- Click in any cell within the spreadsheet that is in the column to be sorted.
- Click the **Sort & Filter** button.
- Text columns will sort A to Z or Z to A; numeric columns will sort from smallest to largest or largest to smallest.

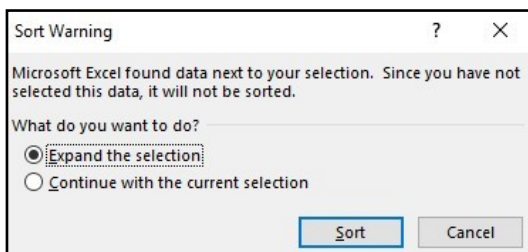


2	Expense
3	Rent/Mortgage
4	Car
5	Electricity
6	Water
7	Gas
8	Total

Tip: If you need to return rows to their original, unsorted order, you need to plan ahead. In a column next to the spreadsheet, add sequential numbers for the rows. You'll be able to sort that column to get the spreadsheet back to its original order.

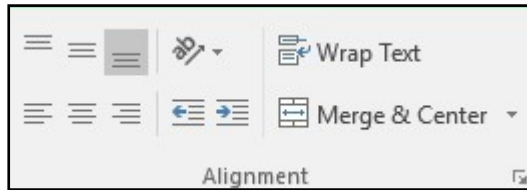
SORT ISSUES & FIXES

- If the spreadsheet has a total row adjacent to the cells with data, it is possible that the **Total row will sort within the other rows**. To avoid this issue, try one of these solutions:
 - Add a blank row between the spreadsheet's data and the calculated row.
 - Select the cells that need to be included in the sort and exclude the calculated row(s) before clicking the Sort & Filter button.
- If a column, rather than a single cell, is selected when sorting, you may see the following warning:







- Click the **Sort** button to “expand the selection”, which means an entire row will sort all together.
- If **Continue with the current selection** is clicked, only the one column will sort, not the corresponding data.

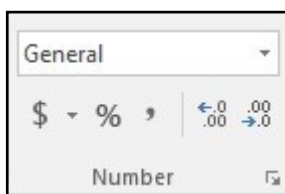
THE HOME TAB: ALIGNMENT







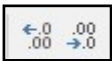
Use the buttons in the **Alignment** group to adjust the positioning of a cell's contents.

	Vertical alignment within a cell. The default is for data to be at the bottom of the cell. It can also be at the top or the middle.
	Horizontal alignment within a cell. While the type of data determines default right or left alignment, this can be changed. Cell contents can also be centered within the cell.
	Wrap text within a cell so that the cell's contents don't go outside the cell's borders.
	The Merge and Center button allows you to merge selected cells and then center the new cell's contents.

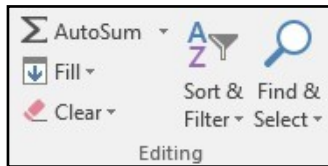
THE HOME TAB: NUMBER GROUP



The **Number** group is used to format numbers and dates. While the Ribbon buttons provide quick formatting for common issues, click the drop down arrow to the right of “General” for a list of more formats you may want to use.

	General formats letters and characters as text, numbers as numbers, and dates as dates. Click the drop down arrow for more commonly used selections.
	The Accounting button adds currency formatting to a cell.
	Converts numbers to percents . For example, type a “1” in a cell, then click the % button for 100%.
	The comma button adds commas and two decimal places to large numbers.
	Increase or decrease the number of decimal places in a number.

HOME TAB: EDITING GROUP



The **Editing** buttons assist with writing formulas, erasing mistakes, sorting or filtering records, and finding specific records.

	Click in a cell. AutoSum will add the values in multiple cells above or to the left of where you've clicked.
	Select a range of cells, starting with the cell that has a value you want to copy (or fill) to a series of numbers.
	Excel formatting can occasionally “stick”. Click the Clear button to Clear All, Clear Contents, or Clear Formatting.
	Sorts rearrange all records in either ascending or descending order. Filters display row that match criteria and hide any others.
	Find displays cells that match specific criteria. Select highlights cells that match criteria.

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