

# **SANDY SENIOR CENTER**

PRESENTS

## **Microsoft Office 365 - EXCEL**

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## **Microsoft Office 365 - EXCEL**

**February 2017 (v1.1)**

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## Acknowledgements

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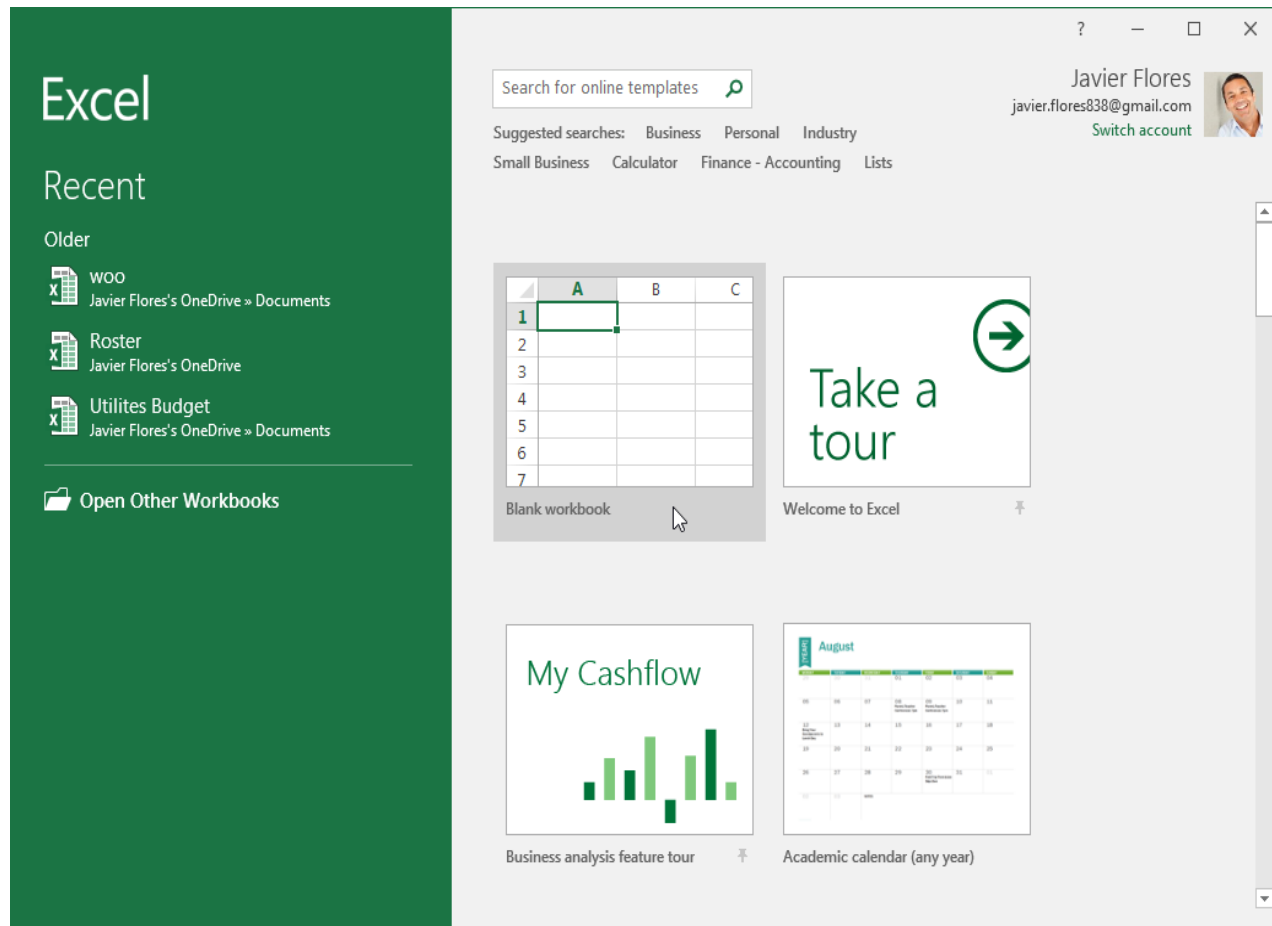
# Getting to know Excel

If you've previously used Excel 2010 or Excel 2013, then Excel 2016 should feel familiar. If you are new to Excel or have more experience with older versions, you should first take some time to become familiar with the **Excel interface**.

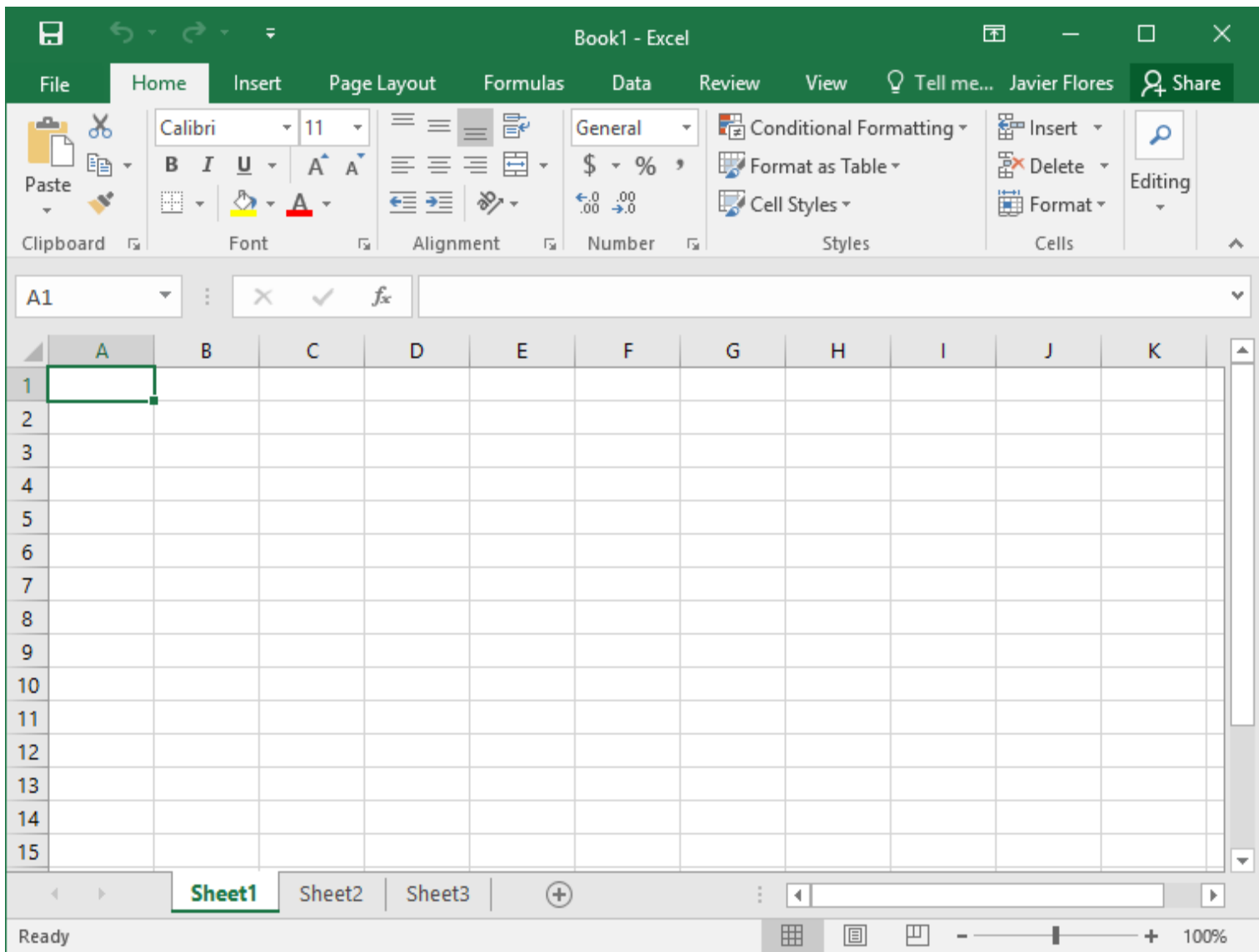
## The Excel interface

When you open Excel 2016 for the first time, the **Excel Start Screen** will appear. From here, you'll be able to create a **new workbook**, choose a **template**, and access your **recently edited workbooks**.

- From the **Excel Start Screen**, locate and select **Blank workbook** to access the Excel interface.



Click the buttons in the interactive below to become familiar with the Excel interface.



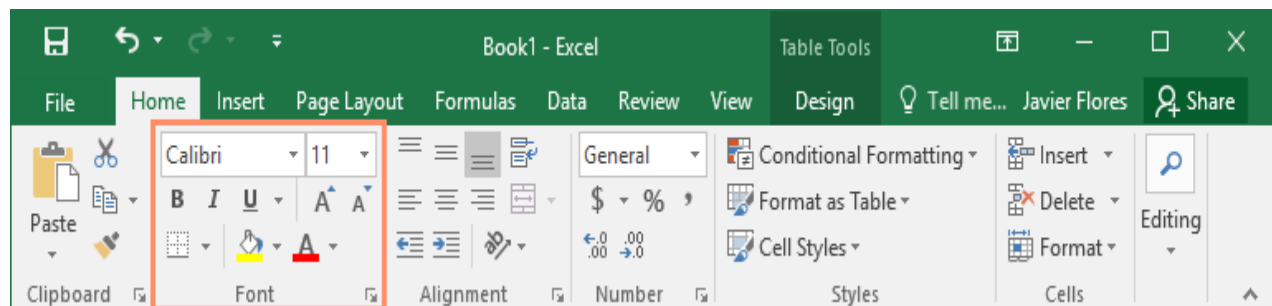
# Working with the Excel environment

The **Ribbon** and **Quick Access Toolbar** are where you will find the commands to perform common tasks in Excel. The **Backstage view** gives you various options for saving, opening a file, printing, and sharing your document.

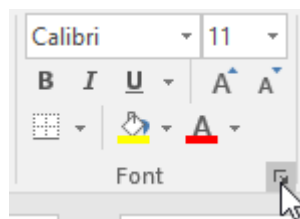
# The Ribbon

Excel 2016 uses a **tabbed Ribbon system** instead of traditional menus. **The Ribbon** contains **multiple tabs**, each with several **groups of commands**. You will use these tabs to perform the most **common tasks** in Excel.

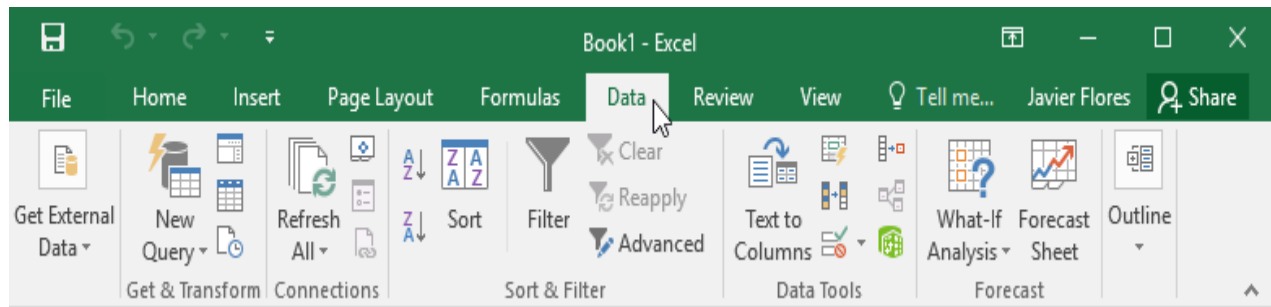
- Each tab will have one or more groups.



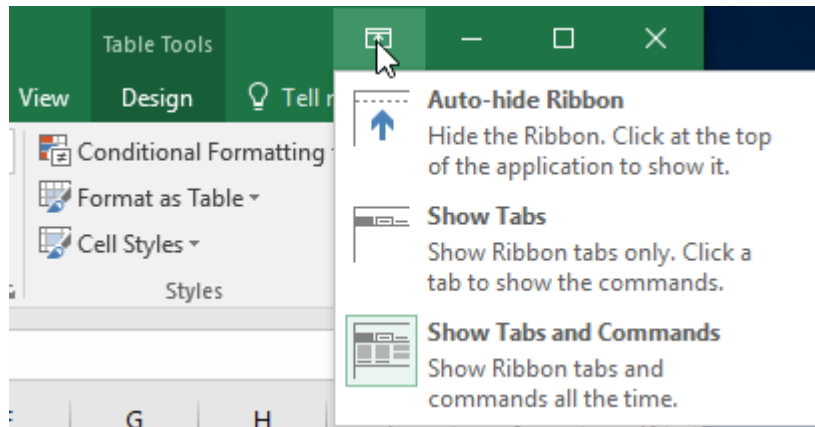
- Some groups will have an arrow you can click for more options.



- Click a tab to see more commands.



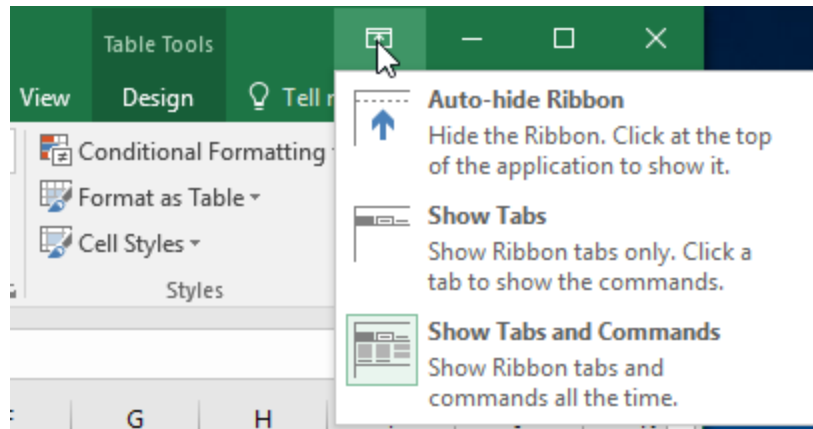
- You can adjust how the Ribbon is displayed with the Ribbon Display Options.



Certain programs, such as **Adobe Acrobat Reader**, may install additional tabs to the Ribbon. These tabs are called **add-ins**.

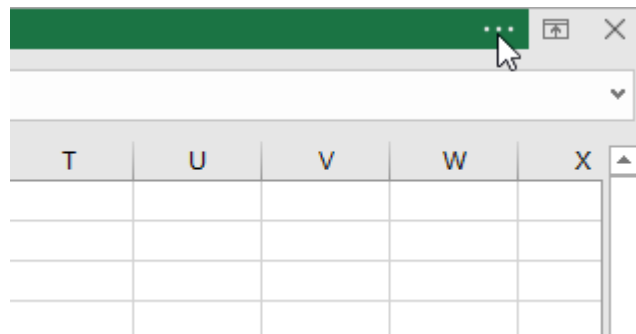
## To change the Ribbon Display Options:

The Ribbon is designed to respond to your current task, but you can choose to **minimize** it if you find that it takes up too much screen space. Click the **Ribbon Display Options** arrow in the upper-right corner of the Ribbon to display the drop-down menu.

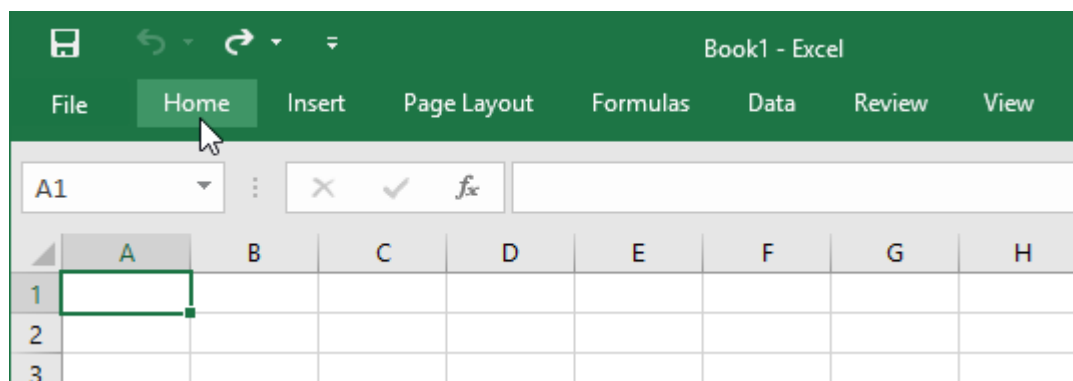


There are three modes in the Ribbon Display Options menu:

- **Auto-hide Ribbon:** Auto-hide displays your workbook in full-screen mode and completely hides the Ribbon. To **show the Ribbon**, click the **Expand Ribbon** command at the top of screen.



- **Show Tabs:** This option hides all command groups when they're not in use, but **tabs** will remain visible. To **show the Ribbon**, simply click a tab.





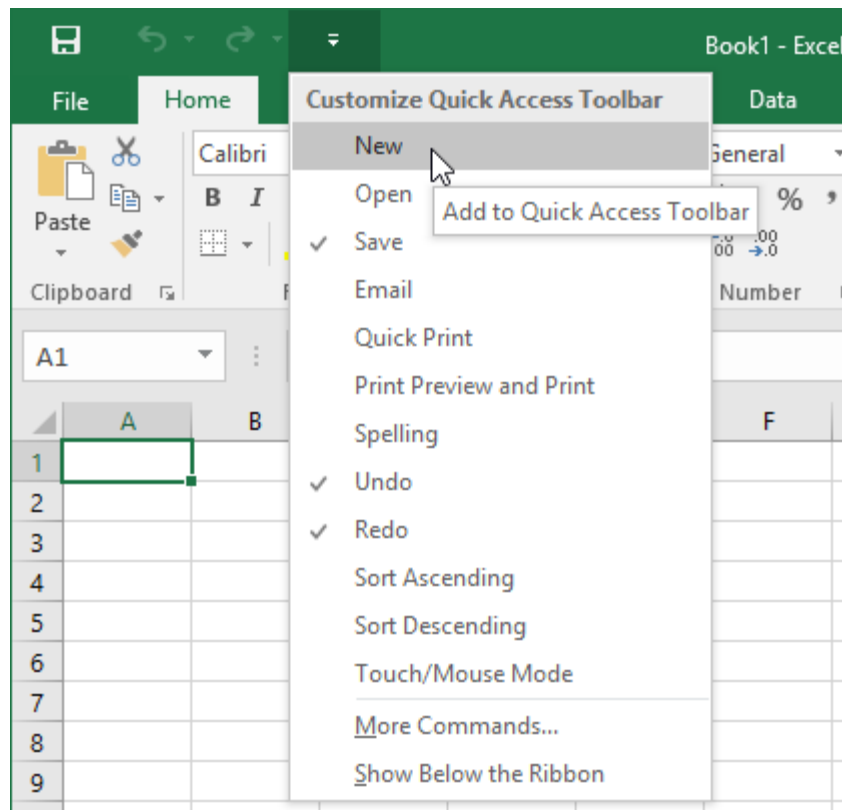
- **Show Tabs and Commands:** This option maximizes the Ribbon. All the tabs and commands will be visible. This option is selected by default when you open Excel for the first time.

# The Quick Access Toolbar

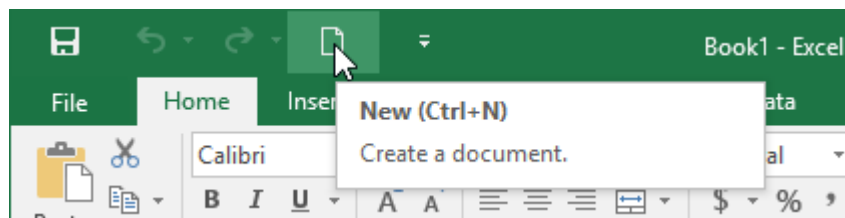
Located just above the Ribbon, the **Quick Access Toolbar** lets you access common commands no matter which tab is selected. By default, it includes the **Save**, **Undo**, and **Repeat** commands. You can add other commands depending on your preference.

## To add commands to the Quick Access Toolbar:

1. Click the **drop-down arrow** to the right of the **Quick Access Toolbar**.
2. Select the **command** you want to add from the drop-down menu. To choose from more commands, select **More Commands**.

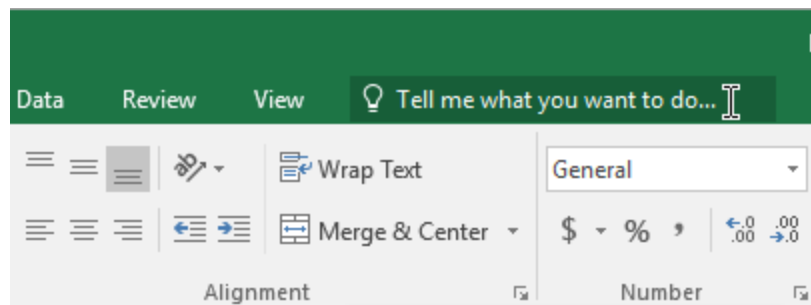


3. The command will be **added** to the Quick Access Toolbar.

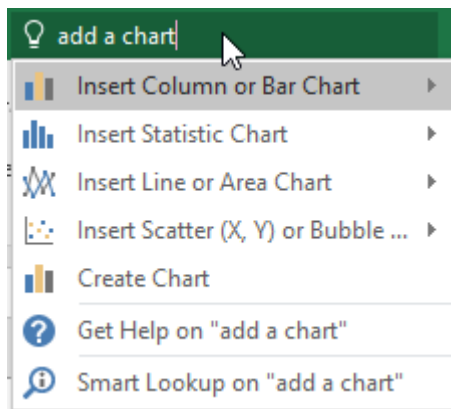


## How to use Tell me:

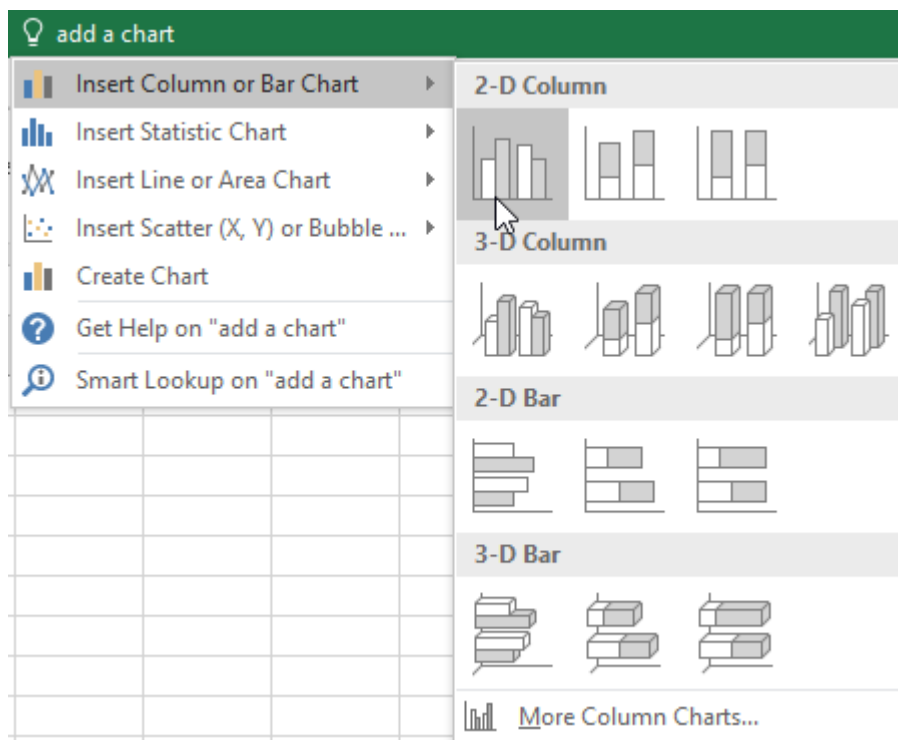
The **Tell me** box works like a search bar to help you quickly find tools or commands you want to use.



1. Type in your own words what you want to do.

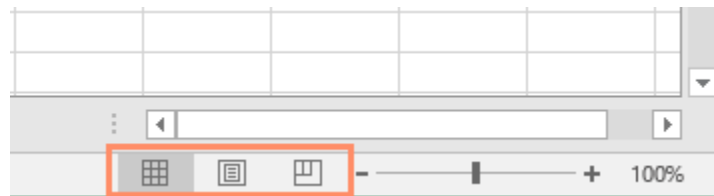


2. The results will give you a few relevant options. To use one, click it like you would a command on the Ribbon.



# Worksheet views

Excel 2016 has a variety of viewing options that change how your workbook is displayed. These views can be useful for various tasks, especially if you're planning to **print** the spreadsheet. To **change worksheet views**, locate the commands in the bottom-right corner of the Excel window and select **Normal view**, **Page Layout view**, or **Page Break view**.



- **Normal view** is the default view for all worksheets in Excel.

The screenshot shows an Excel spreadsheet with the following data:

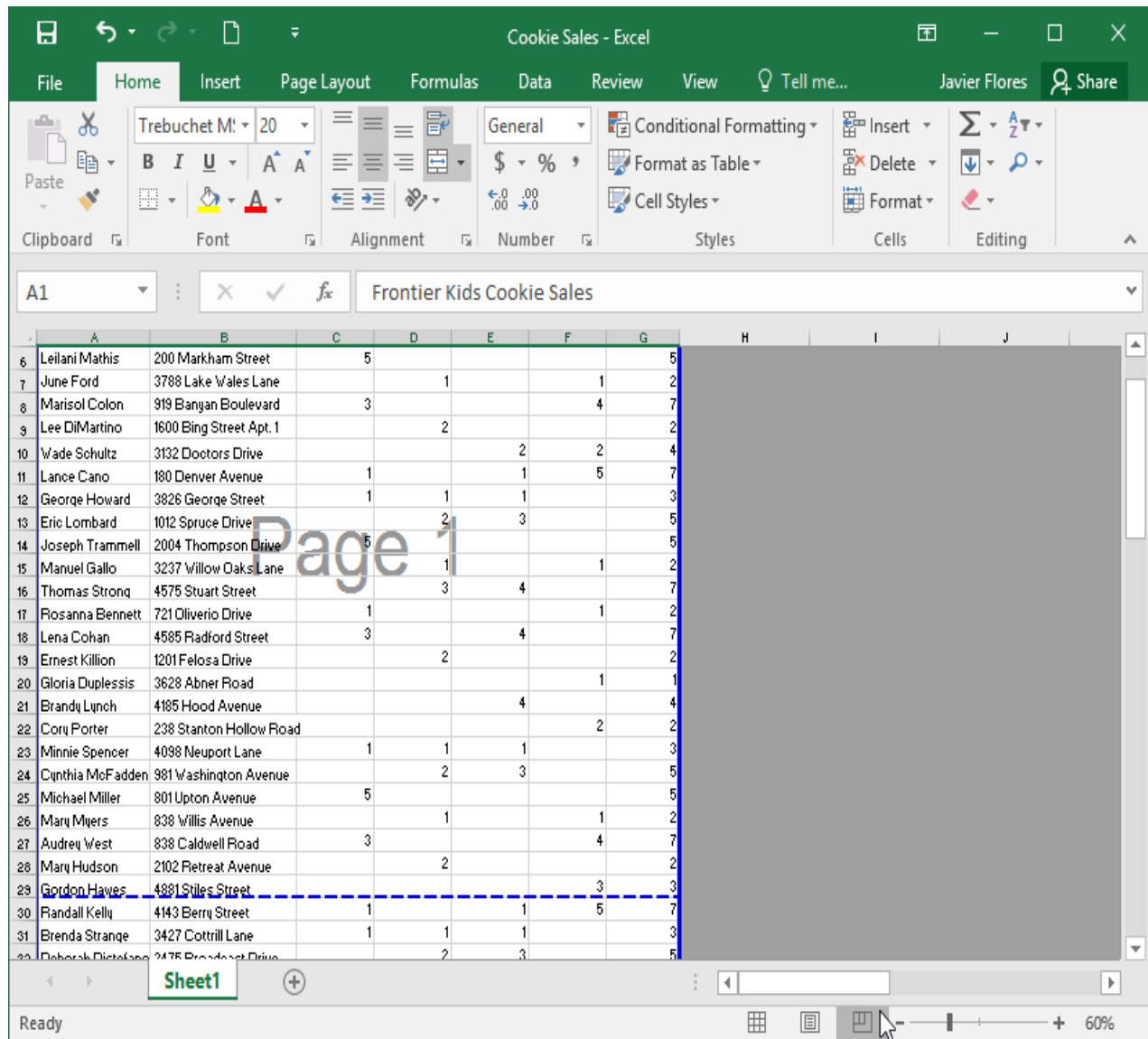
	Name	Address	Gingersnaps	Lemon Drops	Mint Whistles	Macaroons	Total
1	Frontier Kids Cookie Sales						
2	Chris Keller	1167 Coberly Way	1	1	1	1	4
3	Diane Whitley	1605 Bing Street Apt. 2	1	1	1		3
4	Nick Gunderson	54 N. Kentucky Avenue		2	3		5
5	Leilani Mathis	200 Markham Street	5				5
6	June Ford	3788 Lake Wales Lane		1		1	2
7	Marisol Colon	919 Banyan Boulevard	3			4	7
8	Lee DiMartino	1600 Bing Street Apt. 1		2			2
9	Wade Schultz	3132 Doctors Drive			2	2	4
10	Lance Cano	180 Denver Avenue	1		1	5	7
11	George Howard	3826 George Street	1	1	1		3
12	Eric Lombard	1012 Spruce Drive		2	3		5
13	Joseph Trammell	2004 Thompson Drive	5				5
14	Manuel Gallo	3237 Willow Oaks Lane		1		1	2

- **Page Layout view** displays how your worksheets will appear when printed. You can also add headers and footers in this view.

The screenshot shows the Microsoft Excel interface with the 'Home' tab selected. The worksheet is titled 'Cookie Sales - Excel'. The table 'Frontier Kids Cookie Sales' is displayed on 'Sheet1'. The table has 5 columns: Name, Address, Gingersnaps, Lemon Drops, and Mint Whistles. The data is as follows:

Name	Address	Gingersnaps	Lemon Drops	Mint Whistles
Chris Keller	1167 Coberly Way	1	1	1
Diane Whitley	1605 Bing Street Apt. 2	1	1	1
Nick Gunderson	54 N. Kentucky Avenue		2	3
Leilani Mathis	200 Markham Street	5		
June Ford	3788 Lake Wales Lane		1	
Marisol Colon	919 Banyan Boulevard	3		
Lee DiMartino	1600 Bing Street Apt. 1		2	

- **Page Break view** allows you to change the location of page breaks, which is especially helpful when printing a lot of data from Excel.

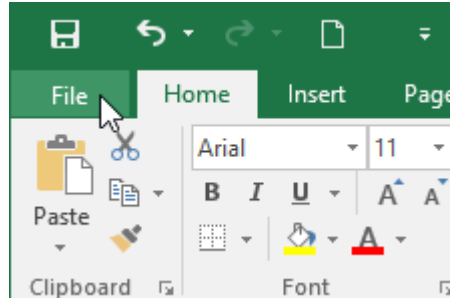


# Backstage view

**Backstage view** gives you various options for saving, opening a file, printing, and sharing your workbooks.

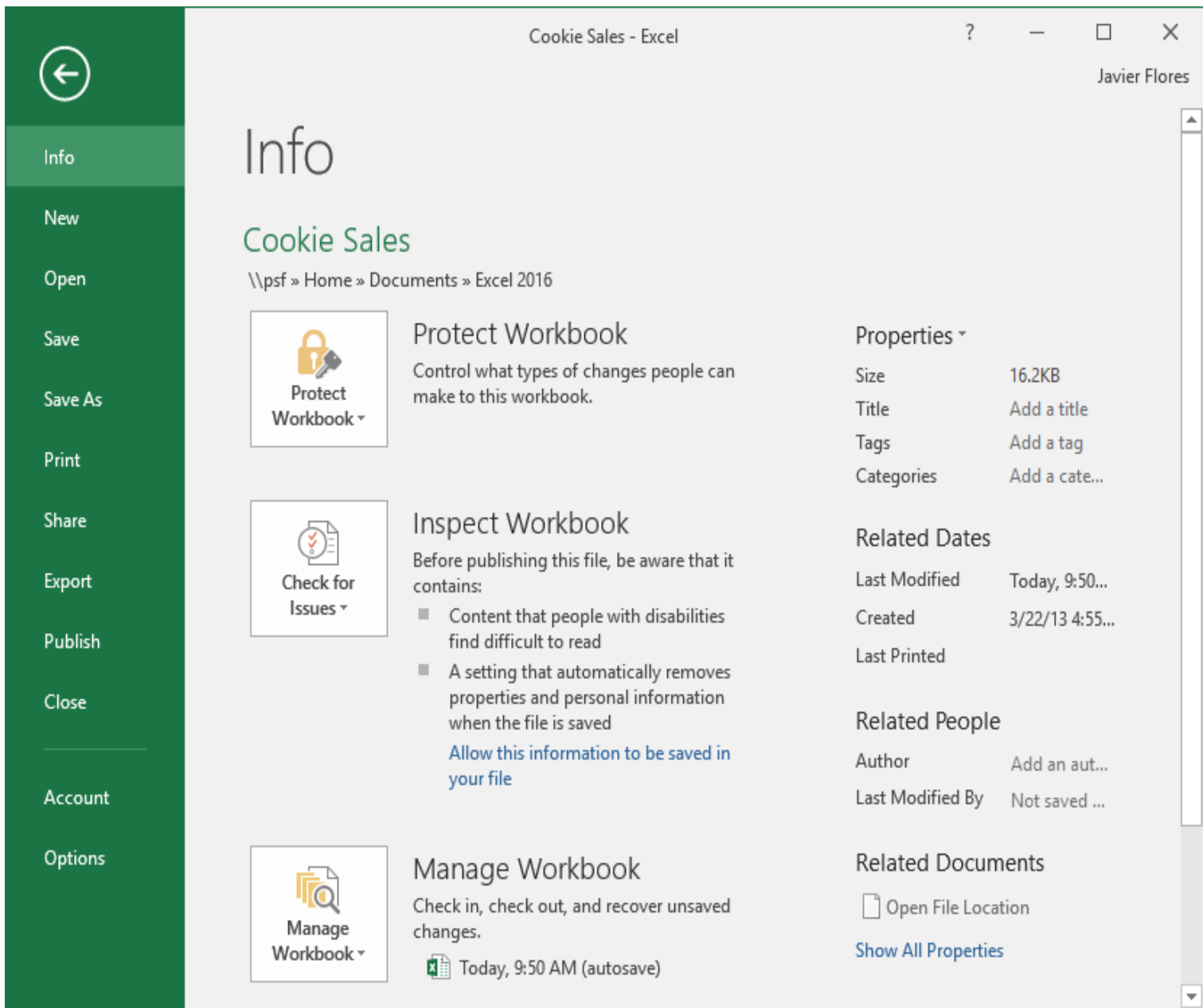
# To access Backstage view:

1. Click the **File** tab on the **Ribbon**. **Backstage view** will appear.



Click the buttons in the interactive below to learn more about using Backstage view.

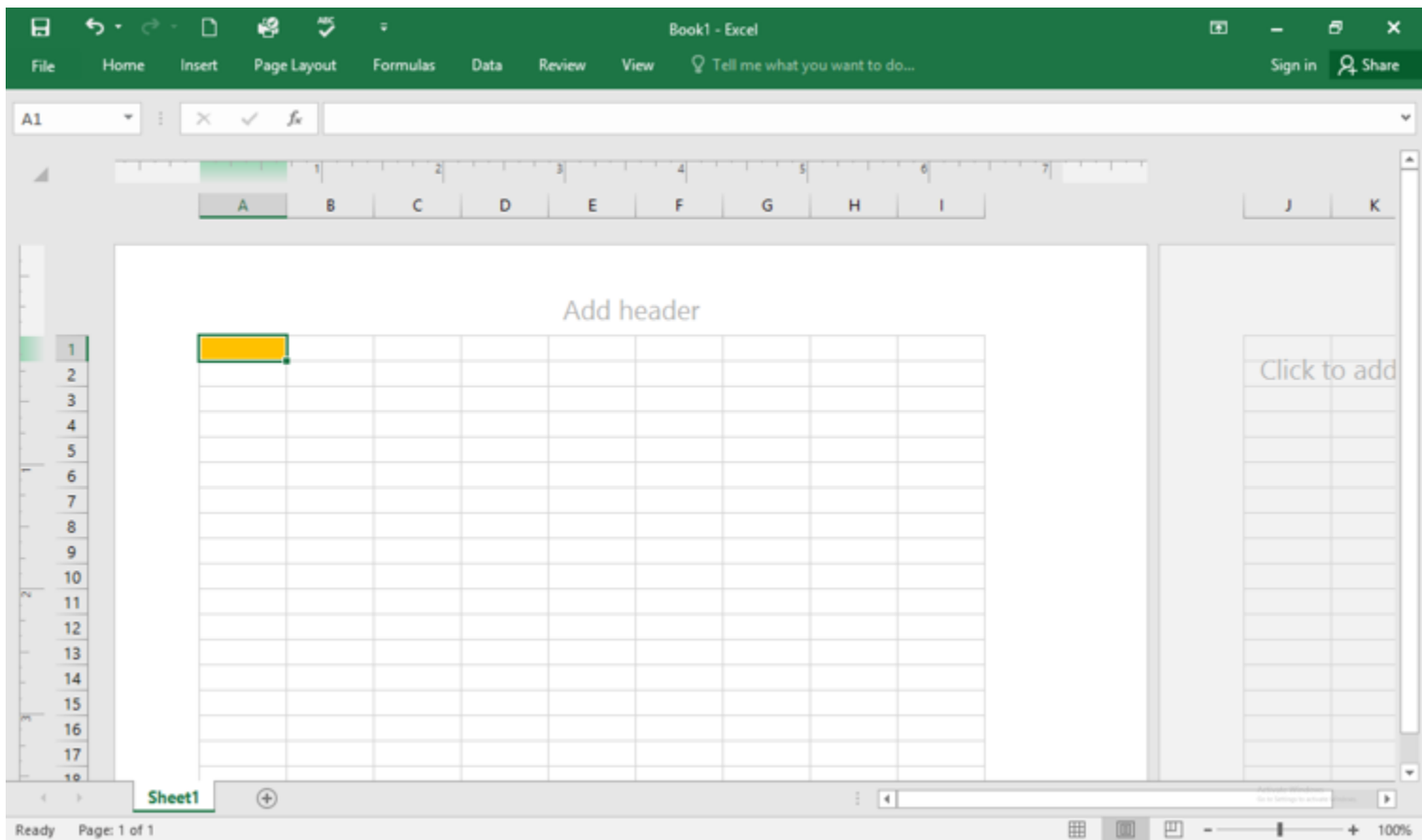




# Challenge!

1. Open **Excel 2016**.
2. Click **Blank Workbook** to open a new spreadsheet.

3. Change the **Ribbon Display Options** to **Show Tabs**.
4. Using the **Customize Quick Access Toolbar**, click to add **New**, **Quick Print**, and **Spelling**.
5. In the **Tell me bar**, type the word **Color**. Hover over **Fill Color** and choose a **yellow**. This will fill a cell with the color yellow.
6. Change the worksheet view to the **Page Layout** option.
7. When you're finished, your screen should look like this:

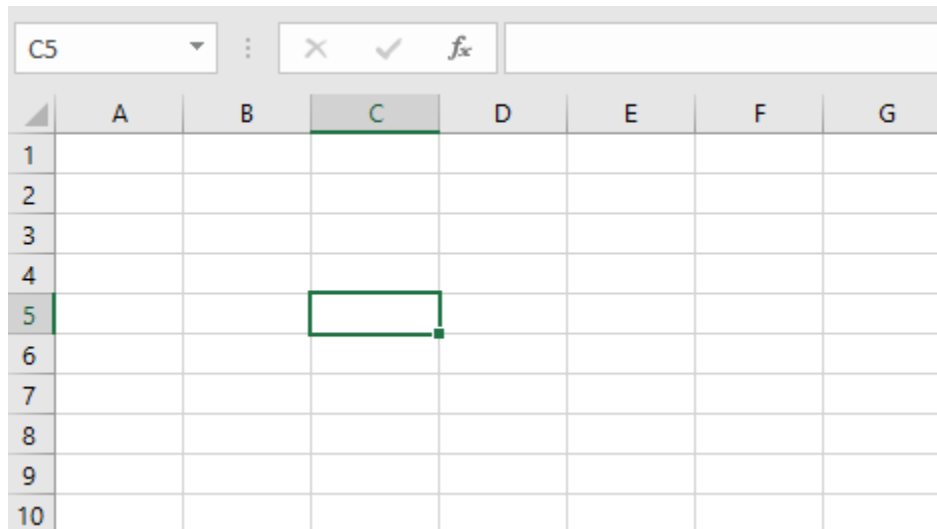


8. Change the **Ribbon Display Options** back to **Show Tabs and Commands**.  
(Close Excel and **Don't Save** changes.)

## Understanding cells

Every worksheet is made up of thousands of rectangles, which are called **cells**. A cell is the **intersection** of a **row** and a **column**—in other words, where a row and column meet.

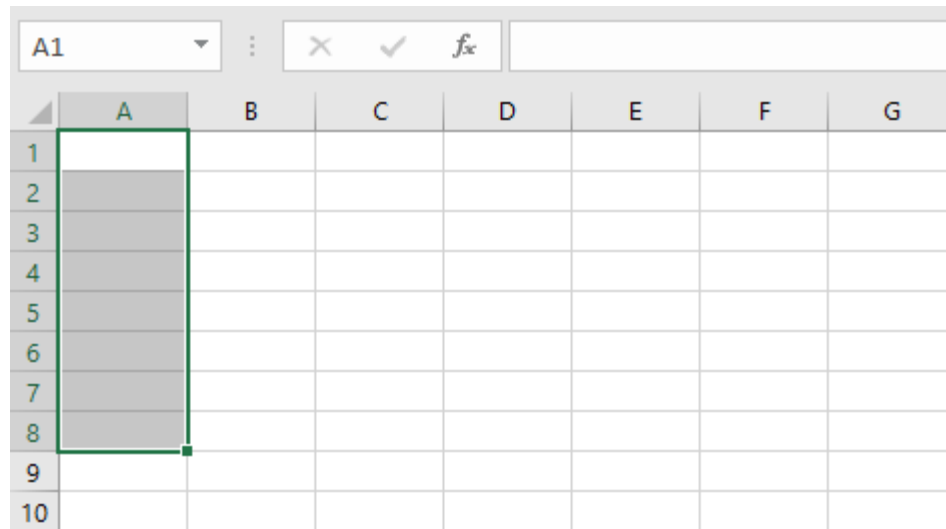
Columns are identified by **letters (A, B, C)**, while rows are identified by **numbers (1, 2, 3)**. Each cell has its own **name**—or **cell address**—based on its column and row. In the example below, the selected cell intersects **column C** and **row 5**, so the cell address is **C5**.



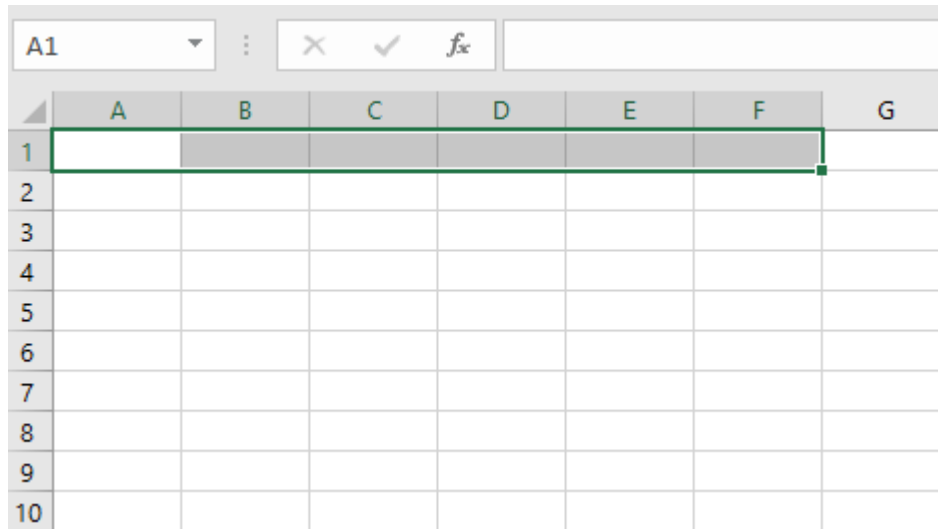
Note that the cell address also appears in the **Name box** in the top-left corner, and that a cell's **column** and **row headings** are **highlighted** when the cell is selected.

You can also select **multiple cells** at the same time. A group of cells is known as a **cell range**. Rather than a single cell address, you will refer to a cell range using the cell addresses of the **first** and **last** cells in the cell range, separated by **colon**. For example, a cell range that included cells A1, A2, A3, A4, and A5 would be written as **A1:A5**. Take a look at the different cell ranges below:

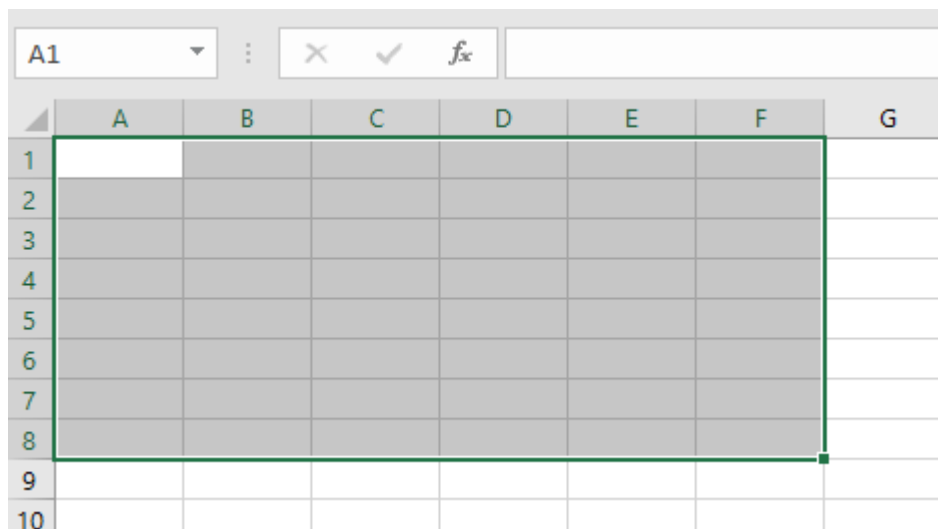
- Cell range **A1:A8**



- Cell range **A1:F1**



- Cell range **A1:F8**

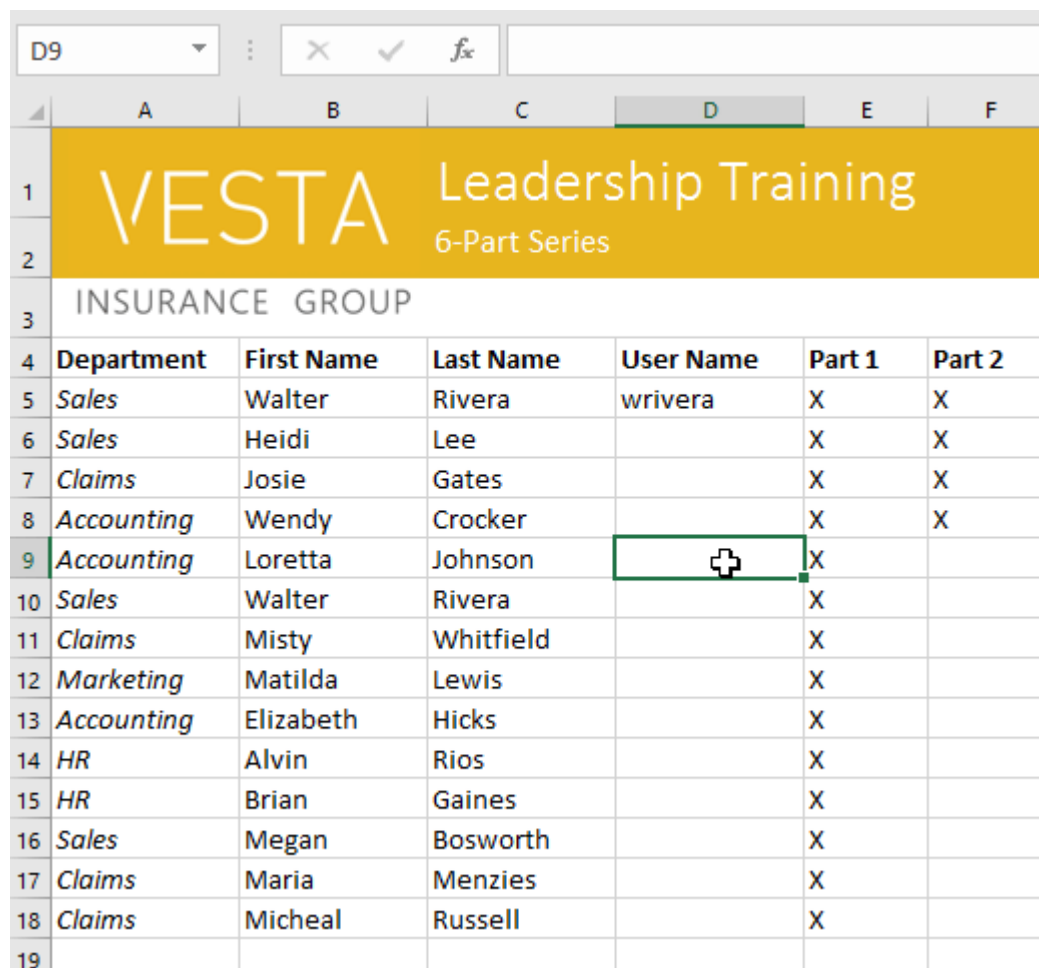


If the columns in your spreadsheet are labeled with numbers instead of letters, you'll need to change the default **reference style** for Excel. Review our Extra on What to learn how.

## To select a cell:

To input or edit cell content, you'll first need to **select** the cell.

1. Click a **cell** to select it. In our example, we'll select cell **D9**.
2. A **border** will appear around the selected cell, and the **column heading** and **row heading** will be highlighted. The cell will remain selected until you click another cell in the worksheet.



The screenshot shows an Excel spreadsheet with the following structure:

- Row 1: Yellow header with "VESTA Leadership Training" and "6-Part Series".
- Row 2: Yellow header with "INSURANCE GROUP".
- Row 3: Grey header with "Department", "First Name", "Last Name", "User Name", "Part 1", and "Part 2".
- Rows 4-18: Data rows with employee information.
- Row 19: Empty row.

Cell D9 is selected, indicated by a green border and a plus sign cursor. The column header "D" and row header "9" are highlighted.

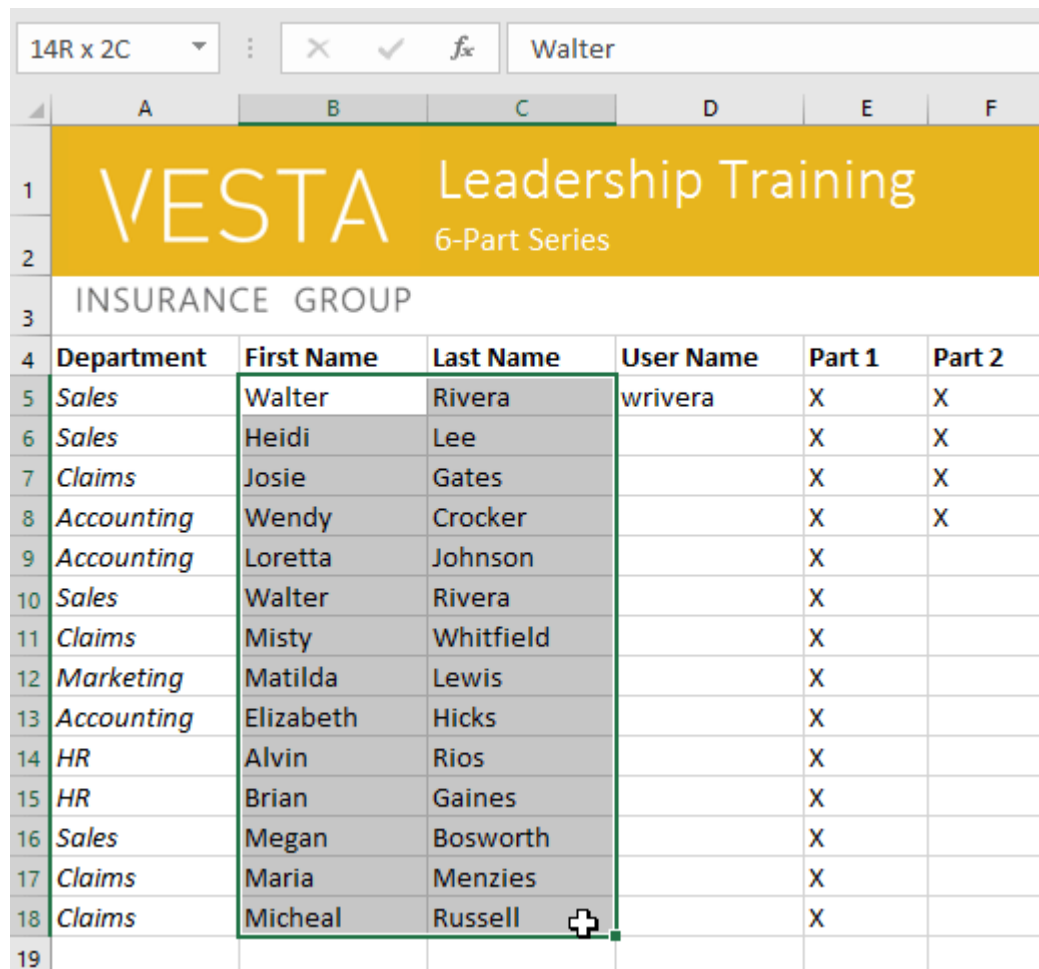
	A	B	C	D	E	F
1	VESTA Leadership Training					
2	6-Part Series					
3	INSURANCE GROUP					
4	Department	First Name	Last Name	User Name	Part 1	Part 2
5	Sales	Walter	Rivera	wrivera	X	X
6	Sales	Heidi	Lee		X	X
7	Claims	Josie	Gates		X	X
8	Accounting	Wendy	Crocker		X	X
9	Accounting	Loretta	Johnson		X	
10	Sales	Walter	Rivera		X	
11	Claims	Misty	Whitfield		X	
12	Marketing	Matilda	Lewis		X	
13	Accounting	Elizabeth	Hicks		X	
14	HR	Alvin	Rios		X	
15	HR	Brian	Gaines		X	
16	Sales	Megan	Bosworth		X	
17	Claims	Maria	Menzies		X	
18	Claims	Micheal	Russell		X	
19						

You can also select cells using the **arrow keys** on your keyboard.

## To select a cell range:

Sometimes you may want to select a larger group of cells, or a **cell range**.

1. Click and drag the mouse until all of the **adjoining cells** you want to select are **highlighted**. In our example, we'll select the cell range **B5:C18**.
2. Release the mouse to **select** the desired cell range. The cells will remain selected until you click another cell in the worksheet.



The screenshot shows an Excel spreadsheet with a yellow header row (row 1) containing 'VESTA Leadership Training' and '6-Part Series'. Row 2 is a grey header row for the 'INSURANCE GROUP' section. Row 3 is a grey header row for the data table. The data table has columns: Department, First Name, Last Name, User Name, Part 1, and Part 2. The cell range B5:C18 is selected, highlighted in green. The selection starts at cell B5 (Sales, Walter, Rivera) and ends at cell C18 (Claims, Micheal, Russell). The status bar at the bottom shows '14R x 2C'.

	A	B	C	D	E	F
1	VESTA Leadership Training					
2	6-Part Series					
3	INSURANCE GROUP					
4	Department	First Name	Last Name	User Name	Part 1	Part 2
5	Sales	Walter	Rivera	wrivera	X	X
6	Sales	Heidi	Lee		X	X
7	Claims	Josie	Gates		X	X
8	Accounting	Wendy	Crocker		X	X
9	Accounting	Loretta	Johnson		X	
10	Sales	Walter	Rivera		X	
11	Claims	Misty	Whitfield		X	
12	Marketing	Matilda	Lewis		X	
13	Accounting	Elizabeth	Hicks		X	
14	HR	Alvin	Rios		X	
15	HR	Brian	Gaines		X	
16	Sales	Megan	Bosworth		X	
17	Claims	Maria	Menzies		X	
18	Claims	Micheal	Russell		X	
19						

# Cell content

Any information you enter into a spreadsheet will be stored in a cell. Each cell can contain different types of **content**, including **text**, **formatting**, **formulas**, and **functions**.

- **Text:** Cells can contain **text**, such as letters, numbers, and dates.

	A	B	C	D	E
1	Date	Sales	Percentage of Total		
2	4/4/16	93	0.71		
3	4/5/16	42	0.78		
4	4/6/16	46	0.86		
5	4/7/16	73	0.28		
6	4/8/16	12	0.49		
7	4/9/16	24	0.65		
8	4/10/16	19	0.57		
9					
10					

- **Formatting attributes:** Cells can contain **formatting attributes** that change the way letters, numbers, and dates are displayed. For example, percentages can appear as 0.15 or 15%. You can even change a cell's **text** or **background color**.

	A	B	C	D	E
1	Date	Sales	Percentage of Total		
2	April 4, 2016	\$93.00	71%		
3	April 5, 2016	\$42.00	78%		
4	April 6, 2016	\$46.00	86%		
5	April 7, 2016	\$73.00	28%		
6	April 8, 2016	\$12.00	49%		
7	April 9, 2016	\$24.00	65%		
8	April 10, 2016	\$19.00	57%		
9					
10					

- **Formulas and functions:** Cells can contain **formulas** and **functions** that calculate cell values. In our example, **SUM(B2:B8)** adds the value of each cell in the cell range B2:B8 and displays the total in cell B9.

B9					
	A	B	C	D	E
1	Date	Sales	Percentage of Total		
2	April 4, 2016	\$93.00	71%		
3	April 5, 2016	\$42.00	78%		
4	April 6, 2016	\$46.00	86%		
5	April 7, 2016	\$73.00	28%		
6	April 8, 2016	\$12.00	49%		
7	April 9, 2016	\$24.00	65%		
8	April 10, 2016	\$19.00	57%		
9	Weekly Sales	\$309.00			
10					

## To insert content:

1. Click a **cell** to select it. In our example, we'll select cell **F9**.

F9								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X			X
10	Sales	Walter	Rivera		X			X
11	Claims	Misty	Whitfield		X			



2. Type something into the selected cell, then press **Enter** on your keyboard. The content will appear in the **cell** and the **formula bar**. You can also input and edit cell content in the formula bar.

The screenshot shows an Excel spreadsheet with a yellow header row (row 1) containing 'VESTA Leadership Training' and '6-Part Series'. Row 2 is also yellow. Row 3 is grey and contains 'INSURANCE GROUP'. Rows 4-11 are white and contain a table. The table has columns: Department, First Name, Last Name, User Name, Part 1, Part 2, and Part 3. Cell F9 is selected and contains the letter 'X'.

	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10	Sales	Walter	Rivera		X			X
11	Claims	Misty	Whitfield		X			

## To delete (or clear) cell content:

1. Select the **cell(s)** with content you want to delete. In our example, we'll select the cell range **A10:H10**.

A10

✕

✓

*f<sub>x</sub>*

Sales

A

B

C

D

E

F

G

H

1

2

3

4

5

6

7

8

9

10

11

12

13

14

VESTA

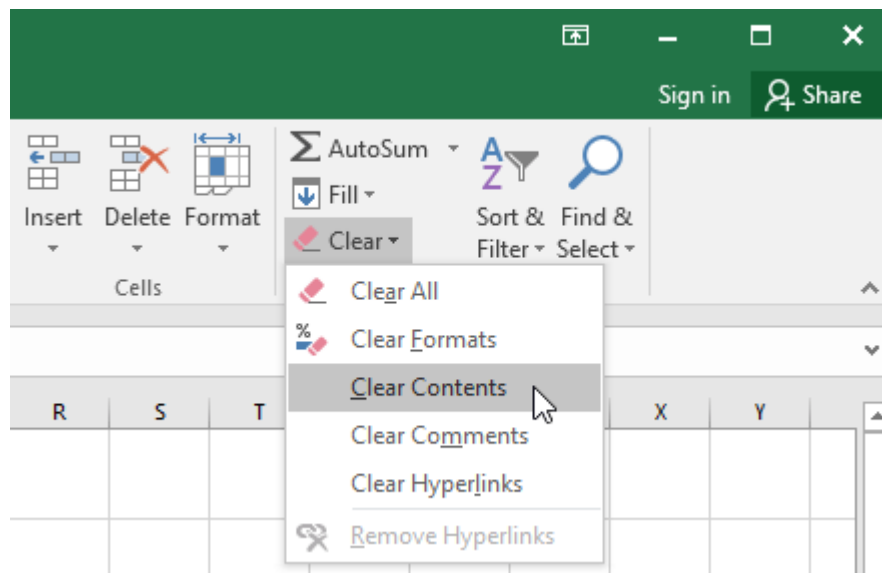
Leadership Training

6-Part Series

INSURANCE GROUP

Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
Sales	Walter	Rivera	wrivera	X	X	On hold	X
Sales	Heidi	Lee		X	X	On hold	
Claims	Josie	Gates		X	X		X
Accounting	Wendy	Crocker		X	X		
Accounting	Loretta	Johnson		X	X		X
Sales	Walter	Rivera		X			X
Claims	Misty	Whitfield		X			
Marketing	Matilda	Lewis		X			
Accounting	Elizabeth	Hicks		X			X
HR	Alvin	Rios		X			

2. Select the **Clear** command on the **Home** tab, then click **Clear Contents**.



3. The cell contents will be deleted.

	A10							
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10								
11	Claims	Misty	Whitfield		X			
12	Marketing	Matilda	Lewis		X			
13	Accounting	Elizabeth	Hicks		X			X
14	HR	Alvin	Rios		X			

You can also use the **Delete** key on your keyboard to delete content from **multiple cells** at once. The **Backspace** key will only delete content from one cell at a time.

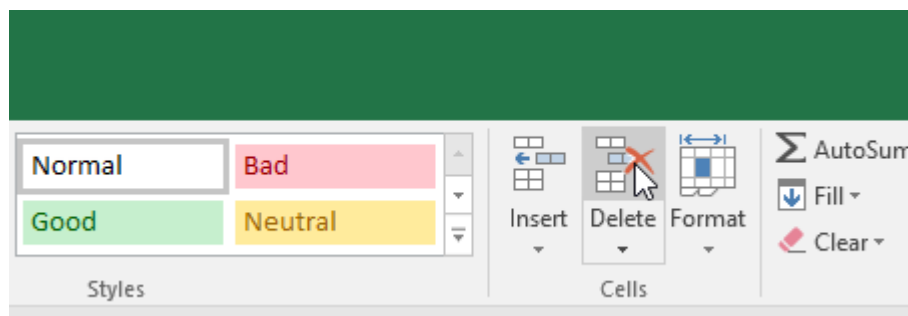
## To delete cells:

There is an important difference between deleting the content of a cell and **deleting the cell itself**. If you delete the entire cell, the cells below it will **shift to fill in the gaps** and **replace the deleted cells**.

1. Select the **cell(s)** you want to delete. In our example, we'll select **A10:H10**.

A10								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10								
11	Claims	Misty	Whitfield		X			
12	Marketing	Matilda	Lewis		X			
13	Accounting	Elizabeth	Hicks		X			X
14	HR	Alvin	Rios		X			

2. Select the **Delete** command from the **Home** tab on the **Ribbon**.



3. The cells below will **shift up** and **fill in the gaps**.

A10								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10	Claims	Misty	Whitfield		X			
11	Marketing	Matilda	Lewis		X			
12	Accounting	Elizabeth	Hicks		X			X
13	HR	Alvin	Rios		X			
14	HR	Brian	Gaines		X			

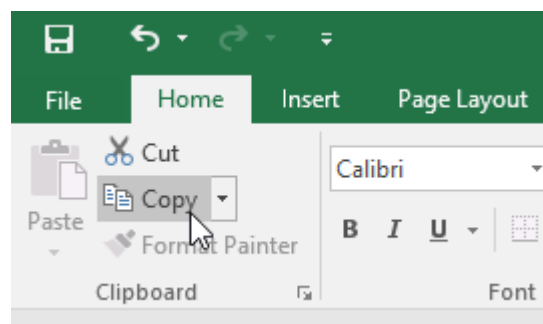
## To copy and paste cell content:

Excel allows you to **copy** content that is already entered into your spreadsheet and **paste** that content to other cells, which can save you time and effort.

1. Select the **cell(s)** you want to **copy**. In our example, we'll select **F9**.

F9								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10	Claims	Misty	Whitfield		X			
11	Marketing	Matilda	Lewis		X			
12	Accounting	Elizabeth	Hicks		X			X
13	HR	Alvin	Rios		X			
14	HR	Brian	Gaines		X			
15	Sales	Megan	Bosworth		X			
16	Claims	Maria	Menzies		X			
17	Claims	Micheal	Russell		X			
18								

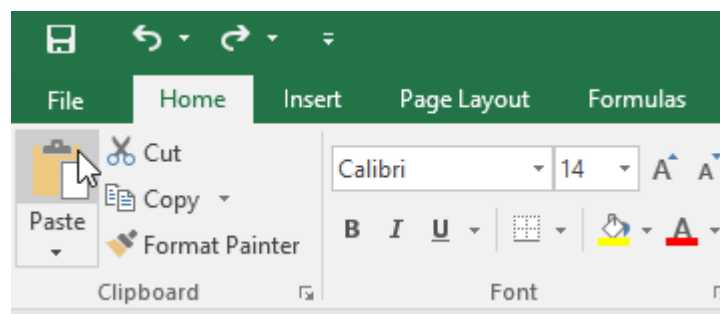
2. Click the **Copy** command on the **Home** tab, or press **Ctrl+C** on your keyboard.



3. Select the **cell(s)** where you want to **paste** the content. In our example, we'll select **F12:F17**. The copied cell(s) will have a **dashed box** around them.

	F12									
	A	B	C	D	E	F	G	H		
1	<div> <div>VESTA</div> <div> Leadership Training 6-Part Series </div> </div>									
2										
3	INSURANCE GROUP									
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3		
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X		
6	Sales	Heidi	Lee		X	X	On hold			
7	Claims	Josie	Gates		X	X		X		
8	Accounting	Wendy	Crocker		X	X				
9	Accounting	Loretta	Johnson		X	X		X		
10	Claims	Misty	Whitfield		X					
11	Marketing	Matilda	Lewis		X					
12	Accounting	Elizabeth	Hicks		X			X		
13	HR	Alvin	Rios		X					
14	HR	Brian	Gaines		X					
15	Sales	Megan	Bosworth		X					
16	Claims	Maria	Menzies		X					
17	Claims	Micheal	Russell		X					
18										

4. Click the **Paste** command on the **Home** tab, or press **Ctrl+V** on your keyboard.



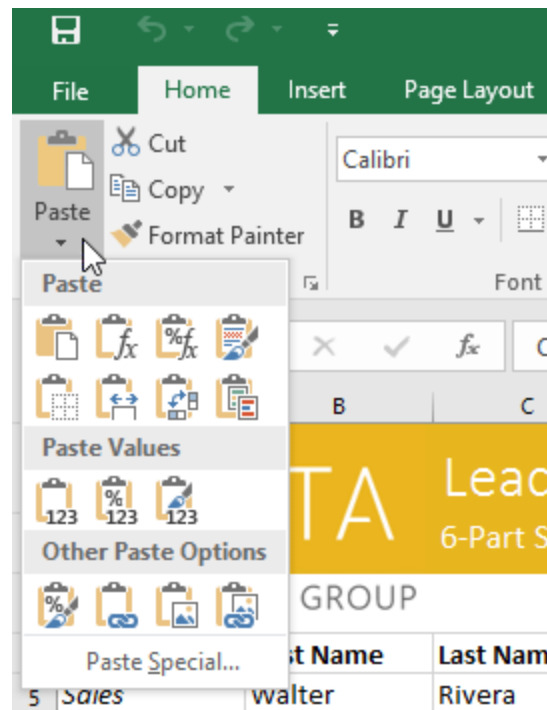
5. The content will be **pasted** into the selected cells.

F12								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold	X
6	Sales	Heidi	Lee		X	X	On hold	
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10	Claims	Misty	Whitfield		X			
11	Marketing	Matilda	Lewis		X			
12	Accounting	Elizabeth	Hicks		X	X		X
13	HR	Alvin	Rios		X	X		
14	HR	Brian	Gaines		X	X		
15	Sales	Megan	Bosworth		X	X		
16	Claims	Maria	Menzies		X	X		
17	Claims	Micheal	Russell		X	X		
18								
19								

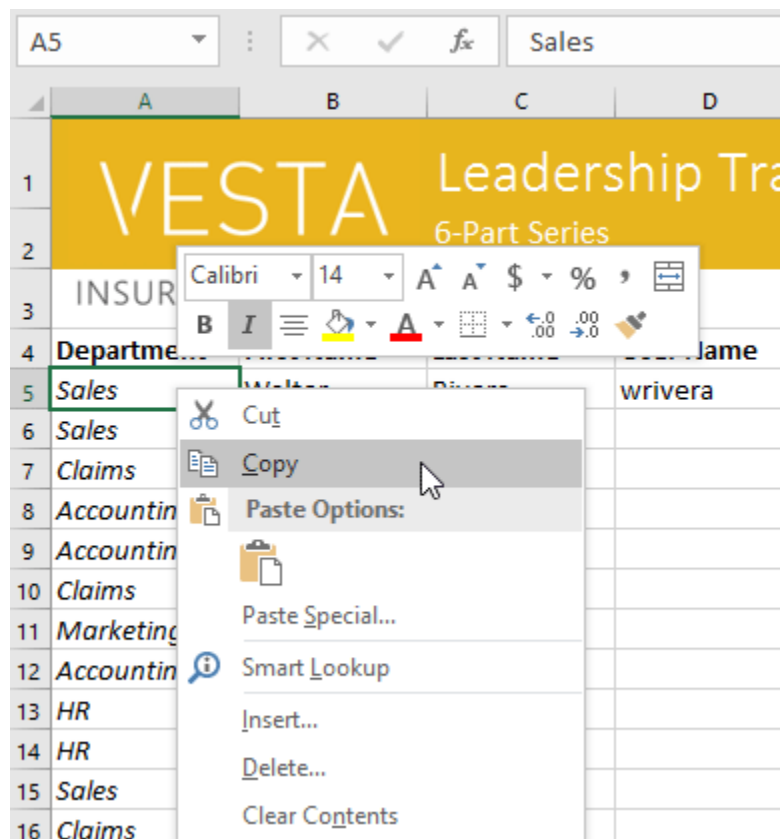
## To access more paste options:

You can also access **additional paste options**, which are especially convenient when working with cells that contain **formulas** or **formatting**. Just click the **drop-down arrow** on the **Paste** command to see these options.





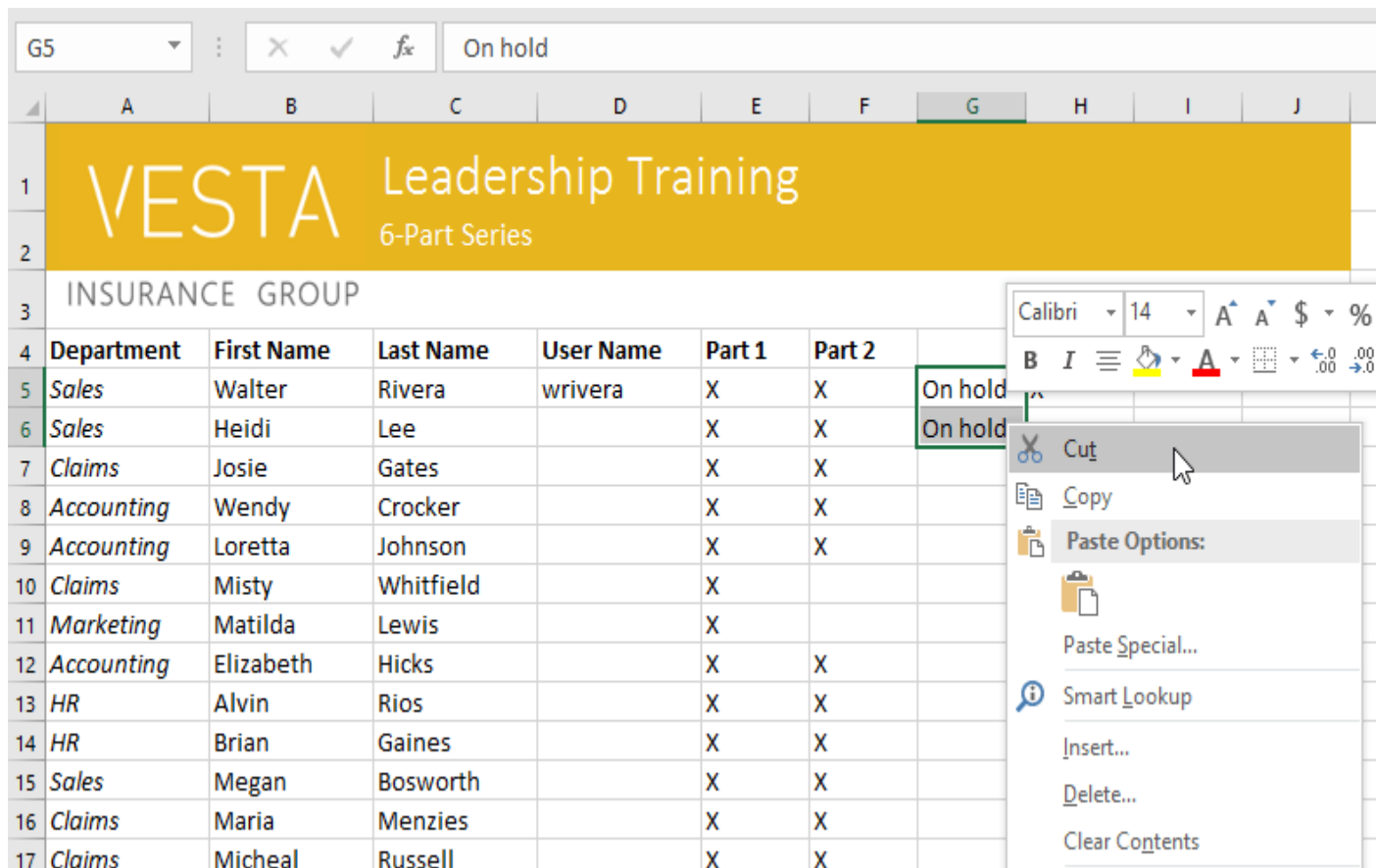
Instead of choosing commands from the Ribbon, you can access commands quickly by **right-clicking**. Simply select the **cell(s)** you want to **format**, then right-click the mouse. A **drop-down menu** will appear, where you'll find several **commands** that are also located on the Ribbon.



# To cut and paste cell content:

Unlike copying and pasting, which **duplicates** cell content, **cutting** allows you to **move** content between cells.

1. Select the **cell(s)** you want to **cut**. In our example, we'll select **G5:G6**.
2. Right-click the mouse and select the **Cut** command. Alternatively, you can use the command on the **Home** tab, or press **Ctrl+X** on your keyboard.



3. Select the cells where you want to **paste** the content. In our example, we'll select **F10:F11**. The cut cells will now have a **dashed box** around them.
4. Right-click the mouse and select the **Paste** command. Alternatively, you can use the command on the **Home** tab, or press **Ctrl+V** on your keyboard.

The screenshot shows the Microsoft Excel interface. The ribbon at the top includes File, Home, Insert, Page Layout, Formulas, Data, Review, and View. The Home ribbon is active, showing options for Clipboard (Paste, Cut, Copy, Format Painter), Font (Calibri, 14, Bold, Italic, Underline, Color, Background Color), Alignment (Wrap Text, Merge & Center), and Number (General, Currency, Percentage, etc.).

The spreadsheet has a yellow header area with the text "VESTA Leadership Training 6-Part Series". Below this is a section titled "INSURANCE GROUP". The data is organized in a table with the following columns: Department, First Name, Last Name, User Name, Part 1, Part 2, and Part 3. The rows contain employee information, with some cells marked "On hold".

A context menu is open over cell F6, which contains the text "On hold". The menu options are: Cut, Copy, Paste Options (highlighted), Smart Lookup, Insert Cut Cells, Delete, and Clear Contents. The "Paste Options" sub-menu is also visible, showing options like Paste Special, Smart Lookup, Insert Cut Cells, Delete, and Clear Contents.

	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3
5	Sales	Walter	Rivera	wrivera	X	X	On hold
6	Sales	Heidi	Lee		X	X	On hold
7	Claims	Josie	Gates		X	X	X
8	Accounting	Wendy	Crocker		X	X	
9	Accounting	Loretta	Johnson		X	X	
10	Claims	Misty	Whitfield		X		
11	Marketing	Matilda	Lewis		X		
12	Accounting	Elizabeth	Hicks		X	X	
13	HR	Alvin	Rios		X	X	
14	HR	Brian	Gaines		X	X	
15	Sales	Megan	Bosworth		X	X	
16	Claims	Maria	Menzies		X	X	
17	Claims	Micheal	Russell		X	X	

5. The cut content will be **removed** from the original cells and **pasted** into the selected cells.

F10								
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3
5	Sales	Walter	Rivera	wrivera	X	X		X
6	Sales	Heidi	Lee		X	X		
7	Claims	Josie	Gates		X	X		X
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X		X
10	Claims	Misty	Whitfield		X	On hold		
11	Marketing	Matilda	Lewis		X	On hold		
12	Accounting	Elizabeth	Hicks		X	X		X
13	HR	Alvin	Rios		X	X		
14	HR	Brian	Gaines		X	X		
15	Sales	Megan	Bosworth		X	X		
16	Claims	Maria	Menzies		X	X		
17	Claims	Micheal	Russell		X	X		
18								

## To drag and drop cells:

Instead of cutting, copying, and pasting, you can **drag and drop** cells to move their contents.

1. Select the **cell(s)** you want to **move**. In our example, we'll select **H4:H12**.
2. Hover the mouse over the **border** of the selected cell(s) until the mouse changes to a **pointer with four arrows**.

H4

✕

✓

*fx*

Part 3

	A	B	C	D	E	F	G	H	I
1	VESTA Leadership Training								
2	6-Part Series								
3	INSURANCE GROUP								
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3	
5	Sales	Walter	Rivera	wrivera	X	X		X	
6	Sales	Heidi	Lee		X	X			
7	Claims	Josie	Gates		X	X		X	
8	Accounting	Wendy	Crocker		X	X			
9	Accounting	Loretta	Johnson		X	X		X	
10	Claims	Misty	Whitfield		X	On hold			
11	Marketing	Matilda	Lewis		X	On hold			
12	Accounting	Elizabeth	Hicks		X	X		X	
13	HR	Alvin	Rios		X	X			
14	HR	Brian	Gaines		X	X			
15	Sales	Megan	Bosworth		X	X			
16	Claims	Maria	Menzies		X	X			
17	Claims	Micheal	Russell		X	X			
18									

3. Click and drag the cells to the **desired location**. In our example, we'll move them to **G4:G12**.

H4							Part 3		
	A	B	C	D	E	F	G	H	I
1	VESTA Leadership Training								
2	6-Part Series								
3	INSURANCE GROUP								
4	Department	First Name	Last Name	User Name	Part 1	Part 2		Part 3	
5	Sales	Walter	Rivera	wrivera	X	X		X	
6	Sales	Heidi	Lee		X	X			
7	Claims	Josie	Gates		X	X		X	
8	Accounting	Wendy	Crocker		X	X		X	
9	Accounting	Loretta	Johnson		X	X		X	
10	Claims	Misty	Whitfield		X	On hold			
11	Marketing	Matilda	Lewis		X	On hold			
12	Accounting	Elizabeth	Hicks		X	X		X	
13	HR	Alvin	Rios		X	X			
14	HR	Brian	Gaines		X	X			
15	Sales	Megan	Bosworth		X	X			
16	Claims	Maria	Menzies		X	X			
17	Claims	Micheal	Russell		X	X			
18									

4. Release the mouse. The cells will be **dropped** in the selected location.

	G4				Part 3				
	A	B	C	D	E	F	G	H	I
1	VESTA Leadership Training								
2	6-Part Series								
3	INSURANCE GROUP								
4	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3		
5	Sales	Walter	Rivera	wrivera	X	X	X		
6	Sales	Heidi	Lee		X	X			
7	Claims	Josie	Gates		X	X	X		
8	Accounting	Wendy	Crocker		X	X			
9	Accounting	Loretta	Johnson		X	X	X		
10	Claims	Misty	Whitfield		X	On hold			
11	Marketing	Matilda	Lewis		X	On hold			
12	Accounting	Elizabeth	Hicks		X	X	X		
13	HR	Alvin	Rios		X	X			
14	HR	Brian	Gaines		X	X			
15	Sales	Megan	Bosworth		X	X			
16	Claims	Maria	Menzies		X	X			
17	Claims	Micheal	Russell		X	X			
18									

## To use the fill handle:

If you're copying cell content to adjacent cells in the same row or column, the **fill handle** is a good alternative to the copy and paste commands.

1. Select the **cell(s)** containing the content you want to use, then hover the mouse over the lower-right corner of the cell so the **fill handle** appears.

	G12							
	A	B	C	D	E	F	G	H
1	VESTA Leadership Training							
2	6-Part Series							
3	INSURANCE GROUP							
4	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3	
5	Sales	Walter	Rivera	wrivera	X	X	X	
6	Sales	Heidi	Lee		X	X		
7	Claims	Josie	Gates		X	X	X	
8	Accounting	Wendy	Crocker		X	X		
9	Accounting	Loretta	Johnson		X	X	X	
10	Claims	Misty	Whitfield		X	On hold		
11	Marketing	Matilda	Lewis		X	On hold		
12	Accounting	Elizabeth	Hicks		X	X	X	
13	HR	Alvin	Rios		X	X		
14	HR	Brian	Gaines		X	X		
15	Sales	Megan	Bosworth		X	X		
16	Claims	Maria	Menzies		X	X		
17	Claims	Micheal	Russell		X	X		
18								

2. Click and drag the **fill handle** until all of the cells you want to fill are selected. In our example, we'll select **G13:G17**.



	G12						
	X						
	A	B	C	D	E	F	G
1	VESTA Leadership Training						
2	6-Part Series						
3	INSURANCE GROUP						
4	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3
5	Sales	Walter	Rivera	wrivera	X	X	X
6	Sales	Heidi	Lee		X	X	
7	Claims	Josie	Gates		X	X	X
8	Accounting	Wendy	Crocker		X	X	
9	Accounting	Loretta	Johnson		X	X	X
10	Claims	Misty	Whitfield		X	On hold	
11	Marketing	Matilda	Lewis		X	On hold	
12	Accounting	Elizabeth	Hicks		X	X	X
13	HR	Alvin	Rios		X	X	
14	HR	Brian	Gaines		X	X	
15	Sales	Megan	Bosworth		X	X	
16	Claims	Maria	Menzies		X	X	
17	Claims	Micheal	Russell		X	X	
18							
19							

3. Release the mouse to **fill** the selected cells.

	VESTA Leadership Training 6-Part Series						
	INSURANCE GROUP						
	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3
	Sales	Walter	Rivera	wrivera	X	X	X
	Sales	Heidi	Lee		X	X	
	Claims	Josie	Gates		X	X	X
	Accounting	Wendy	Crocker		X	X	
	Accounting	Loretta	Johnson		X	X	X
	Claims	Misty	Whitfield		X	On hold	
	Marketing	Matilda	Lewis		X	On hold	
	Accounting	Elizabeth	Hicks		X	X	X
	HR	Alvin	Rios		X	X	X
	HR	Brian	Gaines		X	X	X
	Sales	Megan	Bosworth		X	X	X
	Claims	Maria	Menzies		X	X	X
	Claims	Micheal	Russell		X	X	X

## To continue a series with the fill handle:

The fill handle can also be used to **continue a series**. Whenever the content of a row or column follows a sequential order, like **numbers (1, 2, 3)** or **days (Monday, Tuesday, Wednesday)**, the fill handle can guess what should come next in the series. In most cases, you will need to select **multiple cells** before using the fill handle to help Excel determine the series order. Let's take a look at an example:

1. Select the cell range that contains the series you want to continue. In our example, we'll select **E4:G4**.
2. Click and drag the fill handle to continue the series.

E4					Part 1					
	A	B	C	D	E	F	G	H	I	J
1	VESTA Leadership Training									
2	6-Part Series									
3	INSURANCE GROUP									
4	Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3			
5	Sales	Walter	Rivera	wrivera	X	X	X			Part 6
6	Sales	Heidi	Lee		X	X				
7	Claims	Josie	Gates		X	X	X			
8	Accounting	Wendy	Crocker		X	X				
9	Accounting	Loretta	Johnson		X	X	X			
10	Claims	Misty	Whitfield		X	On hold				
11	Marketing	Matilda	Lewis		X	On hold				
12	Accounting	Elizabeth	Hicks		X	X	X			
13	HR	Alvin	Rios		X	X	X			
14	HR	Brian	Gaines		X	X	X			
15	Sales	Megan	Bosworth		X	X	X			
16	Claims	Maria	Menzies		X	X	X			
17	Claims	Micheal	Russell		X	X	X			
18										

3. Release the mouse. If Excel understood the series, it will be continued in the selected cells. In our example, Excel added **Part 4**, **Part 5**, and **Part 6** to **H4:J4**.

E4

✕

✓

*f<sub>x</sub>*

Part 1

A

B

C

D

E

F

G

H

I

J

K

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

VESTA

Leadership Training

6-Part Series

INSURANCE GROUP

Department	First Name	Last Name	User Name	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6
Sales	Walter	Rivera	wrivera	X	X	X			
Sales	Heidi	Lee		X	X				
Claims	Josie	Gates		X	X	X			
Accounting	Wendy	Crocker		X	X				
Accounting	Loretta	Johnson		X	X	X			
Claims	Misty	Whitfield		X	On hold				
Marketing	Matilda	Lewis		X	On hold				
Accounting	Elizabeth	Hicks		X	X	X			
HR	Alvin	Rios		X	X	X			
HR	Brian	Gaines		X	X	X			
Sales	Megan	Bosworth		X	X	X			
Claims	Maria	Menzies		X	X	X			
Claims	Micheal	Russell		X	X	X			

# Challenge!

1. Open our [practice workbook](#).
2. Select cell **D6** and type **hlee**.
3. **Clear the contents** in row 14.
4. **Delete** column G.
5. Using either **cut and paste** or **drag and drop**, move the contents of row 18 to row 14.
6. Use the **fill handle** to put an X in cells F9:F17.

7. When you're finished, your workbook should look like this:

	C	D	E	F	G	H	I
1	Leadership Training						
2	6-Part Series						
3							
4	Last Name	User Name	Part 1	Part 2	Part 3		
5	Rivera	wrivera	X	X	X		
6	Lee	hlee	X	X			
7	Gates		X	X	X		
8	Crocker		X	X			
9	Johnson		X	X	X		
10	Rivera		X	X	X		
11	Whitfield		X	X			
12	Lewis		X	X			
13	Hicks		X	X	X		
14	Russell		X	X			
15	Gaines		X	X			
16	Bosworth		X	X			
17	Menzies		X	X			

# Introduction to Formulas

One of the most powerful features in Excel is the ability to **calculate** numerical information using **formulas**. Just like a calculator, Excel can add, subtract, multiply, and divide. In this lesson, we'll show you how to use **cell references** to create simple formulas.

Optional: Download our [practice workbook](#).

Watch the video below to learn more about groups and subtotals in Excel.

# Mathematical operators

Excel uses standard operators for formulas, such as a **plus sign** for addition (+), a **minus sign** for subtraction (-), an **asterisk** for multiplication (\*), a **forward slash** for division (/), and a **caret** (^) for exponents.

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponents	^

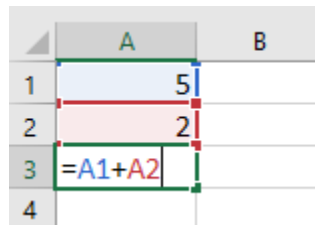
All formulas in Excel must begin with an **equals sign** (=). This is because the cell contains, or is equal to, the formula and the value it calculates.

# Understanding cell references

While you can create simple formulas in Excel using numbers (for example, **=2+2** or **=5\*5**), most of the time you will use **cell addresses** to create a formula. This is known as making a **cell reference**. Using cell references will ensure that your formulas are always accurate because you

can change the value of referenced cells without having to rewrite the formula.

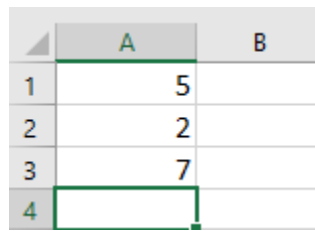
In the formula below, cell A3 adds the values of cells A1 and A2 by making cell references:



An Excel spreadsheet with columns A and B and rows 1 through 4. Cell A1 contains the number 5, and cell A2 contains the number 2. Cell A3 is selected and contains the formula `=A1+A2`. The formula bar shows the formula being entered. The cells A1 and A2 are highlighted with red and green borders respectively, indicating they are part of the formula's calculation.

	A	B
1	5	
2	2	
3	=A1+A2	
4		

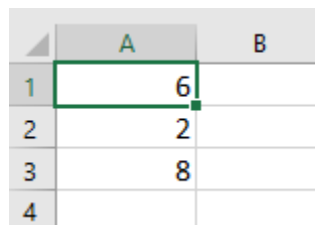
When you press Enter, the formula calculates and displays the answer in cell A3:



The same Excel spreadsheet as before, but now cell A3 displays the result of the formula, which is 7. The formula bar is empty, and the cell A3 is highlighted with a green border.

	A	B
1	5	
2	2	
3	7	
4		

If the values in the referenced cells change, the formula automatically recalculates:



The same Excel spreadsheet as before, but now the values in cells A1 and A2 have changed. Cell A1 now contains 6, and cell A2 now contains 2. Cell A3 has automatically recalculated and now displays the result 8. The formula bar is empty, and the cell A3 is highlighted with a green border.

	A	B
1	6	
2	2	
3	8	
4		

By combining a mathematical operator with cell references, you can create a variety of simple formulas in Excel. Formulas can also include a combination of cell references and numbers, as in the examples below:

=A1+A2	Adds cells A1 and A2
=C4-3	Subtracts 3 from cell C4
=E7/J4	Divides cell E7 by J4
=N10*1.05	Multiplies cell N10 by 1.05
=R5^2	Finds the square of cell R5

## To create a formula:

In our example below, we'll use a simple formula and cell references to calculate a budget.

1. Select the **cell** that will contain the formula. In our example, we'll select cell **D12**.

D12			
	B	C	D
2			
3	QUANTITY	PRICE PER UNIT	LINE TOTAL
4	15	\$8.75	
5	18	\$2.59	
6	9	\$14.25	
7	12	\$2.99	
8			
9			
10		JUNE BUDGET	\$1,200
11		JULY BUDGET	\$1,500
12		TOTAL	+



2. Type the **equals sign (=)**. Notice how it appears in both the **cell** and the **formula bar**.

SUM		X	✓	<i>f<sub>x</sub></i>	=
	B	C	D		
2					
3	QUANTITY	PRICE PER UNIT	LINE TOTAL		
4	15	\$8.75			
5	18	\$2.59			
6	9	\$14.25			
7	12	\$2.99			
8					
9					
10		JUNE BUDGET	\$1,200		
11		JULY BUDGET	\$1,500		
12		TOTAL	=		

3. Type the **cell address** of the cell you want to reference first in the formula:  
cell **D10** in our example. A **blue border** will appear around the referenced cell.

SUM		X	✓	<i>f<sub>x</sub></i>	=D10
	B	C	D		
2					
3	QUANTITY	PRICE PER UNIT	LINE TOTAL		
4	15	\$8.75			
5	18	\$2.59			
6	9	\$14.25			
7	12	\$2.99			
8					
9					
10		JUNE BUDGET	\$1,200		
11		JULY BUDGET	\$1,500		
12		TOTAL	=D10		

4. Type the **mathematical operator** you want to use. In our example, we'll type the **addition sign (+)**.

5. Type the **cell address** of the cell you want to reference second in the formula:  
cell **D11** in our example. A **red border** will appear around the referenced cell.

SUM				=D10+D11
	B	C	D	
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75		
5	18	\$2.59		
6	9	\$14.25		
7	12	\$2.99		
8				
9				
10		JUNE BUDGET	\$1,200	
11		JULY BUDGET	\$1,500	
12		TOTAL	=D10+D11	

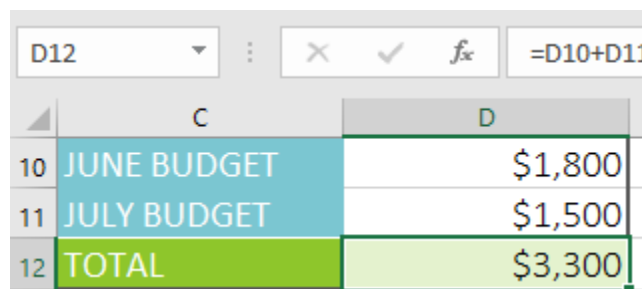
6. Press **Enter** on your keyboard. The formula will be **calculated**, and the **value** will be displayed in the cell. If you select the cell again, notice that the cell displays the result, while the formula bar displays the formula.

D12				=D10+D11
	B	C	D	
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75		
5	18	\$2.59		
6	9	\$14.25		
7	12	\$2.99		
8				
9				
10		JUNE BUDGET	\$1,200	
11		JULY BUDGET	\$1,500	
12		TOTAL	\$2,700	

If the result of a formula is too large to be displayed in a cell, it may appear as **pound signs** (#####) instead of a value. This means the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

## Modifying values with cell references

The true advantage of cell references is that they allow you to **update data** in your worksheet without having to rewrite formulas. In the example below, we've modified the value of cell B1 from \$1,200 to \$1,800. The formula in B3 will automatically recalculate and display the new value in cell B3.



The screenshot shows an Excel spreadsheet with a formula bar at the top displaying '=D10+D11'. The spreadsheet has two columns, C and D, and three rows of data. Row 10 is 'JUNE BUDGET' with a value of \$1,800. Row 11 is 'JULY BUDGET' with a value of \$1,500. Row 12 is 'TOTAL' with a value of \$3,300. The cells are color-coded: blue for headers, green for totals, and white for data.

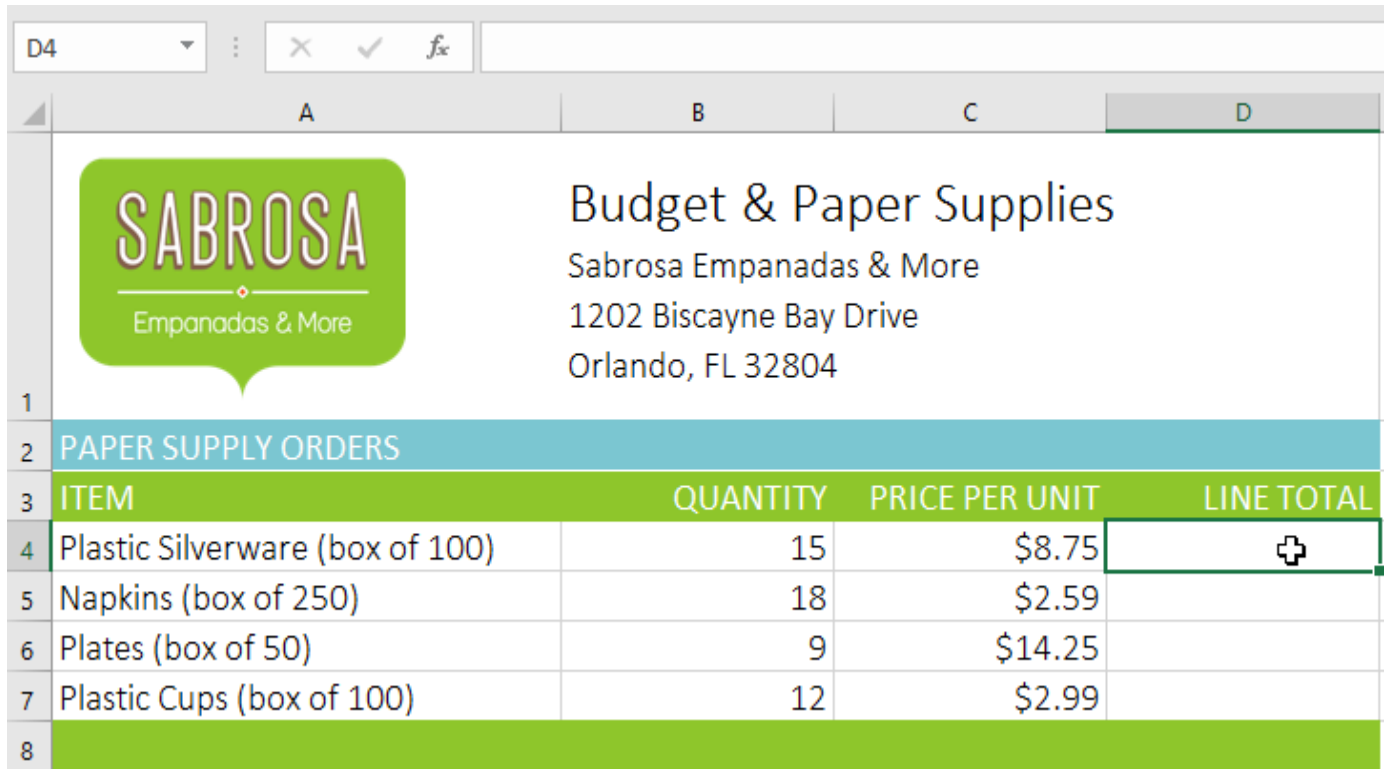
	C	D
10	JUNE BUDGET	\$1,800
11	JULY BUDGET	\$1,500
12	TOTAL	\$3,300

Excel **will not always tell you** if your formula contains an error, so it's up to you to check all of your formulas. To learn how to do this, you can read the [Double-Check Your Formulas](#) lesson from our [Excel Formulas](#) tutorial.


## To create a formula using the point-and-click method:

Instead of typing cell addresses manually, you can **point and click** the cells you want to include in your formula. This method can save a lot of time and effort when creating formulas. In our example below, we'll create a formula to calculate the cost of ordering several boxes of plastic silverware.

1. Select the **cell** that will contain the formula. In our example, we'll select cell **D4**.



The screenshot shows an Excel spreadsheet with the following content:

	A	B	C	D
1	<div><div>Budget &amp; Paper Supplies Sabrosa Empanadas &amp; More 1202 Biscayne Bay Drive Orlando, FL 32804</div></div>			
2	PAPER SUPPLY ORDERS			
3	ITEM	QUANTITY	PRICE PER UNIT	LINE TOTAL
4	Plastic Silverware (box of 100)	15	\$8.75	
5	Napkins (box of 250)	18	\$2.59	
6	Plates (box of 50)	9	\$14.25	
7	Plastic Cups (box of 100)	12	\$2.99	
8				

2. Type the **equals sign (=)**.
3. Select the **cell** you want to reference first in the formula: cell **B4** in our example.  
The **cell address** will appear in the formula.

B4

✕

✓

*fx*

=B4

A

B

C

D

SABROSA

Empanadas & More

Budget & Paper Supplies

Sabrosa Empanadas & More

1202 Biscayne Bay Drive

Orlando, FL 32804

1

2

3

4

5

6

7

8

PAPER SUPPLY ORDERS

ITEM

QUANTITY

PRICE PER UNIT

LINE TOTAL

Plastic Silverware (box of 100)

15

\$8.75

=B4

Napkins (box of 250)

18

\$2.59

Plates (box of 50)

9


\$14.25

Plastic Cups (box of 100)


12

\$2.99

4. Type the **mathematical operator** you want to use. In our example, we'll type the **multiplication sign (\*)**.
5. Select the **cell** you want to reference second in the formula: cell **C4** in our example. The **cell address** will appear in the formula.

C4				=B4*C4
	A	B	C	D
1	 <div> <h2>Budget &amp; Paper Supplies</h2> <p>Sabrosa Empanadas &amp; More 1202 Biscayne Bay Drive Orlando, FL 32804</p> </div>			
2	PAPER SUPPLY ORDERS			
3	ITEM	QUANTITY	PRICE PER UNIT	LINE TOTAL
4	Plastic Silverware (box of 100)	15	\$8.75	=B4*C4
5	Napkins (box of 250)	18	\$2.59	
6	Plates (box of 50)	9	\$14.25	
7	Plastic Cups (box of 100)	12	\$2.99	
8				

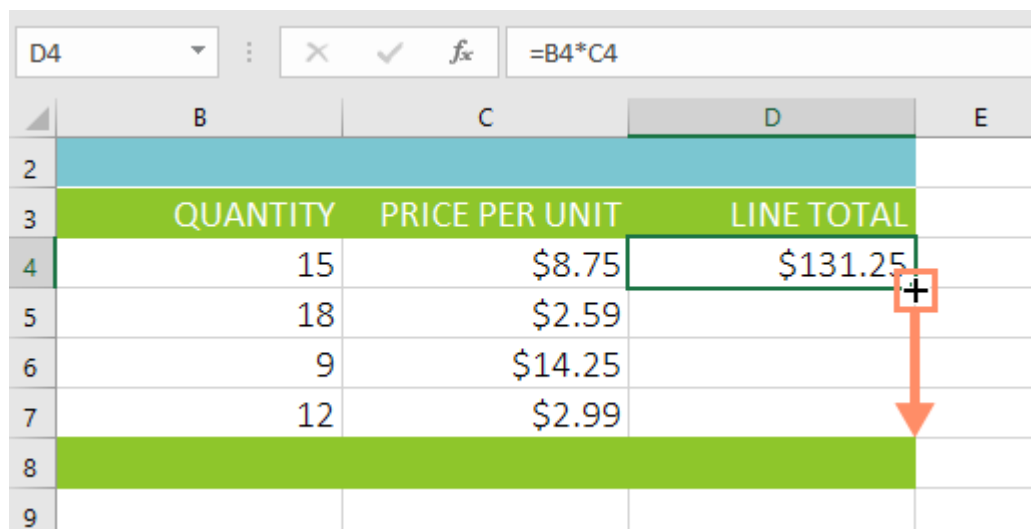
6. Press **Enter** on your keyboard. The formula will be **calculated**, and the **value** will be displayed in the cell.

D4				=B4*C4
	A	B	C	D
1	 <div> <h2>Budget &amp; Paper Supplies</h2> <p>Sabrosa Empanadas &amp; More 1202 Biscayne Bay Drive Orlando, FL 32804</p> </div>			
2	PAPER SUPPLY ORDERS			
3	ITEM	QUANTITY	PRICE PER UNIT	LINE TOTAL
4	Plastic Silverware (box of 100)	15	\$8.75	\$131.25
5	Napkins (box of 250)	18	\$2.59	
6	Plates (box of 50)	9	\$14.25	
7	Plastic Cups (box of 100)	12	\$2.99	
8				

# Copying formulas with the fill handle

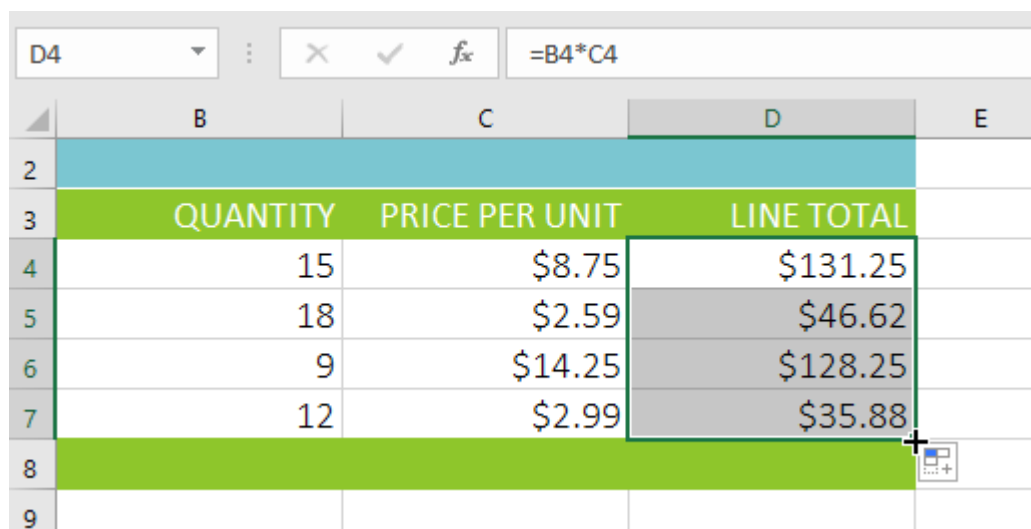
Formulas can also be **copied** to adjacent cells with the **fill handle**, which can save a lot of time and effort if you need to perform the **same calculation** multiple times in a worksheet. The **fill handle** is the small square at the bottom-right corner of the selected cell(s).

1. Select the cell containing the formula you want to copy. Click and drag the **fill handle** over the cells you want to fill.



	B	C	D	E
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75	\$131.25	
5	18	\$2.59		
6	9	\$14.25		
7	12	\$2.99		
8				
9				

2. After you release the mouse, the formula will be copied to the selected cells.



	B	C	D	E
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75	\$131.25	
5	18	\$2.59	\$46.62	
6	9	\$14.25	\$128.25	
7	12	\$2.99	\$35.88	
8				
9				

# To edit a formula:

Sometimes you may want to modify an existing formula. In the example below, we've entered an incorrect cell address in our formula, so we'll need to correct it.

1. Select the **cell** containing the formula you want to edit. In our example, we'll select cell **D12**.

D12				=D9+D11
	B	C	D	
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75	\$131.25	
5	18	\$2.59	\$46.62	
6	9	\$14.25	\$128.25	
7	12	\$2.99	\$35.88	
8				
9				
10		JUNE BUDGET	\$1,200	
11		JULY BUDGET	\$1,500	
12		TOTAL	✚ \$1,500	

2. Click the **formula bar** to edit the formula. You can also **double-click** the cell to view and edit the formula directly within the cell.




D12				=D9+D11
	B	C	D	Formula Bar
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75	\$131.25	
5	18	\$2.59	\$46.62	
6	9	\$14.25	\$128.25	
7	12	\$2.99	\$35.88	
8				
9				
10		JUNE BUDGET	\$1,200	
11		JULY BUDGET	\$1,500	
12		TOTAL	\$1,500	

3. A **border** will appear around any referenced cells. In our example, we'll change the first part of the formula to reference cell **D10** instead of cell **D9**.

SUM				=D9+D11
	B	C	D	
2				
3	QUANTITY	PRICE PER UNIT	LINE TOTAL	
4	15	\$8.75	\$131.25	
5	18	\$2.59	\$46.62	
6	9	\$14.25	\$128.25	
7	12	\$2.99	\$35.88	
8				
9				
10		JUNE BUDGET	\$1,200	
11		JULY BUDGET	\$1,500	
12		TOTAL	=D9+D11	

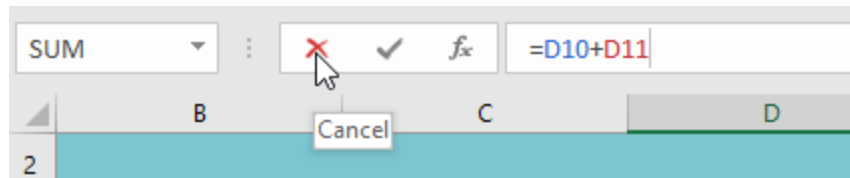
4. When you're finished, press **Enter** on your keyboard or select the **Enter** command in the formula bar.

SUM		X		<i>f<sub>x</sub></i>	=D10+D11
	B	Enter	C		D
2					
3	QUANTITY	PRICE PER UNIT	LINE TOTAL		
4	15	\$8.75	\$131.25		
5	18	\$2.59	\$46.62		
6	9	\$14.25	\$128.25		
7	12	\$2.99	\$35.88		
8					
9					
10	JUNE BUDGET		\$1,200		
11	JULY BUDGET		\$1,500		
12	TOTAL		=D10+D11		

5. The formula will be **updated**, and the **new value** will be displayed in the cell.

D12					=D10+D11
	B	C	D		
2					
3	QUANTITY	PRICE PER UNIT	LINE TOTAL		
4	15	\$8.75	\$131.25		
5	18	\$2.59	\$46.62		
6	9	\$14.25	\$128.25		
7	12	\$2.99	\$35.88		
8					
9					
10		JUNE BUDGET	\$1,200		
11		JULY BUDGET	\$1,500		
12		TOTAL	\$2,700		


If you change your mind, you can press the **Esc** key on your keyboard or click the **Cancel** command in the formula bar to avoid accidentally making changes to your formula.



To show all of the formulas in a spreadsheet, you can hold the **Ctrl** key and press ` (grave accent). The grave accent key is usually located in the top-left corner of the keyboard. You can press **Ctrl**+` again to switch back to the normal view.

# Challenge!

1. Open our [practice workbook](#).
2. Click the **Challenge** tab in the bottom-left of the workbook.
3. Create a formula in cell **D4** that multiplies the quantity in **B4** by the price per unit in cell **C4**.
4. Use the **fill handle** to copy the formula in cell **D4** to cells **D5:D7**.
5. Change the price per unit for the fried plantains in cell **C6** to \$2.25. Notice that the line total automatically changes as well.
6. Edit the formula for the total in cell **D8** so it also adds cell **D7**.
7. When you're finished, your workbook should look like this:

	A	B	C	D
1	 <div> <h2>Customer Invoice</h2> <p>Sabrosa Empanadas &amp; More 1202 Biscayne Bay Drive Orlando, FL 32804</p> </div>			
2	Customer Invoice #19480			
3	ITEM	QUANTITY	PRICE PER UNIT	LINE TOTAL
4	Empanadas: Braised Short Rib	15	\$3.75	\$56.25
5	Empanadas: Nutella and Banana	18	\$2.59	\$46.62
6	Sides: Fried Plantains	15	\$2.25	\$33.75
7	Sides: Rice and Black Beans	12	\$2.15	\$25.80
8	TOTAL			\$162.42