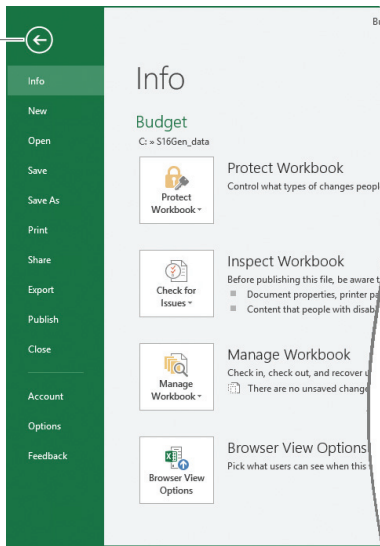
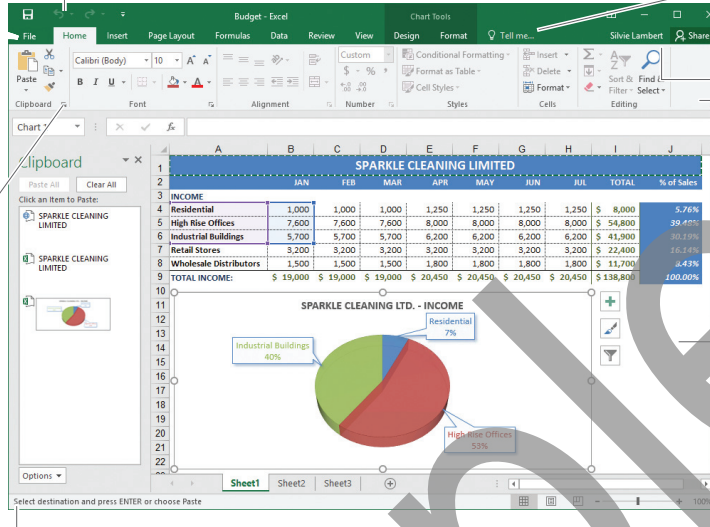


Exploring the Microsoft Excel 2016 Interface

Backstage view – Provides access to pages from where you can create, open, save, print, share, and close workbooks. You can also display workbook information and modify settings, such as workbook protection and metadata (shown below), change Excel options, and sign in to Office. Click the **File** tab to open the Backstage view. Click this button to return to the workbook.



Quick Access Toolbar – Provides quick access to button commands you use often. Click the button to enable or disable buttons to be shown or hidden. Click **More Commands** to further customize the Quick Access Toolbar.



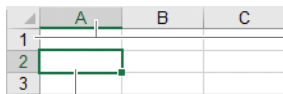
Tell Me – Allows you to apply commands and obtain help. Click and type what you want to do to display a list of related program commands and help topics, then click the desired item.

Sign in link – Displays "Sign in" or the user name used to sign in to Office. Signing in provides access to online storage such as OneDrive (Microsoft account), OneDrive for Business, and SharePoint Online (Office 365 account).

Ribbon – Contains the commands used to perform tasks. It is organized into tabs, groups, and buttons (representing Excel commands). To select Ribbon commands using the mouse, point to the desired items and click.

To select Ribbon commands using the keyboard, press the **ALT** key followed by the letter or number key associated with the desired tab and/or commands. See the **"Contextual tabs"** topic below for additional information.

Worksheet area – Displays a grid (gridlines not shown) of **rows** and **columns** that intersect to form **cells**, where data (text, numbers, and formulas) are entered. Cells can be formatted to either enhance their appearance or display data in a more meaningful way (e.g., totals with dollar signs).



Column and Row Headings – Allows you to identify individual cells or ranges of cells. Column **A** and row **2** are highlighted in the image as a result of cell **A2** being selected.

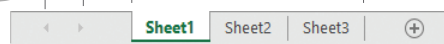
Name Box – Allows you to name ranges and go to named ranges. Click the button to list all of the named ranges.

Cell Pointer – Allows you to identify the active cell, which is also the entry point for data to be inserted and edited.

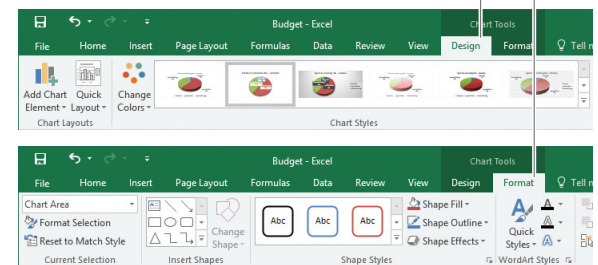
Formula Bar – Allows you to display and edit the contents of the active cell.



Sheet tabs – Allows you to identify one worksheet from another. Click a **Sheet tab** to select it. Click the button to insert additional worksheets. Click these buttons to navigate sheet-by-sheet. Point to them to obtain other navigational instructions.



Contextual tabs – Appears on the Ribbon in addition to the standard tabs when certain objects are selected in a workbook (e.g., the **Chart Tools** contextual tab appears when a chart element is selected). Contextual tabs contain groups and buttons specific to the object selected. In some cases, multiple tabs will be available within the Contextual tab, as shown in the examples below.



Featured Objectives

PAGE 1

Exploring the Microsoft Excel 2016 Interface

- Learn about the Excel 2016 user interface, including its screen components and how to use them.

PAGE 2

Getting Started

- Learn how to launch and close Excel 2016, as well as open, create, save, close, and print workbooks.

Selecting Cells and Worksheets

- Learn how to most effectively select cells, rows, columns, and worksheets.

PAGE 3

Entering and Editing Data

- Learn how to work with columns and rows, as well as how to enter, edit, move, copy, and delete data.

Working with Formulas

- Learn how to insert simple and more complex formulas.

PAGE 5

Formatting Data

- Learn how to apply formatting to cells.

Managing Worksheets

- Learn how to adjust window panes, manage worksheets, apply page setup settings, and insert headers and footers.

PAGE 7

Working with Charts


- Learn how to create and format charts.

Organizing Worksheets


- Learn how to create and use range names, unlock cells and apply worksheet protection, as well as create and use worksheet outlines.

Getting Started

► Launching Microsoft Excel 2016

- If using Windows 10, click in the **Start** menu search box, type **Excel 2016**, and then select **Excel 2016** from the results.
- If using Windows 8 or Windows 8.1, from the Start screen, type **Excel 2016**, and then click the **Excel 2016** icon.
- If using Windows 7, click the  button, point to **All Programs** > **Microsoft Office 2016**, and then select **Excel 2016**.

► Closing Microsoft Excel 2016

- Click the Excel application **Close**  button, or press **ALT+F4**.
- Note:** If the workbook has changed since it was last saved, you will be prompted to save it.

► Signing In and Out of Office

Signing in allows you to maintain custom settings when using Excel 2016 on multiple devices. You can also save, open, and share documents from an online storage location. Specifically, sign in using your personal Microsoft account to obtain access to “OneDrive,” or sign in using an assigned Office 365 account (e.g., from your school, or work place) to obtain access to “OneDrive for Business,” as well as “SharePoint Online.”

1. Click the **Sign in** link in the top-right corner of the application window.
- OR –

Select **File** > **Account**, and then click the **Sign in** button.



2. Type the e-mail address of the account to be used, and then click the **Next** button.
 3. Type the password of the account, and then click the **Sign in** button.
- To sign out of Office, select **File** > **Account**, click the **Sign out** link, and then click the **Yes** button.

Note: Unlike signing out of a program or network, signing out of Office removes your account from your Office installation. Therefore, any functionality available while signed in will be lost.

► Opening Workbooks

1. Click the **File** tab, and then select **Open**.
2. To open a recent workbook, select **Recent**, and then select the desired workbook from the list.

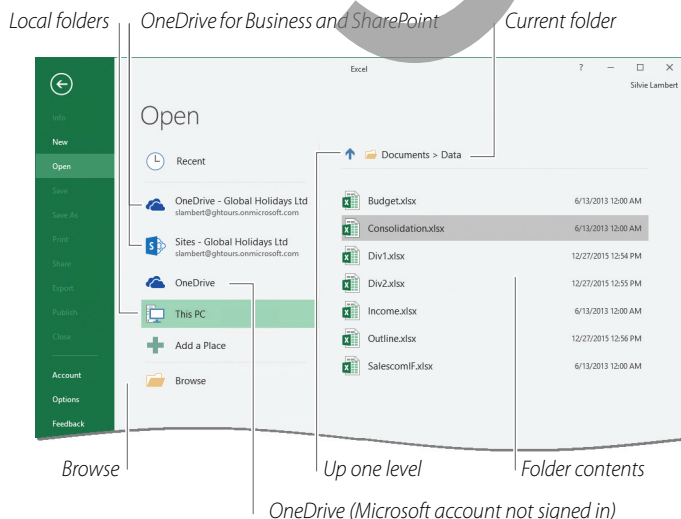
– OR –

To open a workbook that is stored locally, select **This PC**, and then click once on a file or folder to open it. Or click the  button to move up one level at a time as high as the **Documents** folder, if required. You can also click the open folder icon to the right of the  button, locate and select the desired workbook using the **Open** dialog box, and then click **Open**.

– OR –


Select **Browse**, locate and select the desired workbook using the **Open** dialog box, and then click **Open**.

3. You can also open documents stored on OneDrive, OneDrive for Business, and SharePoint, provided you have signed in.



Selecting Cells and Worksheets

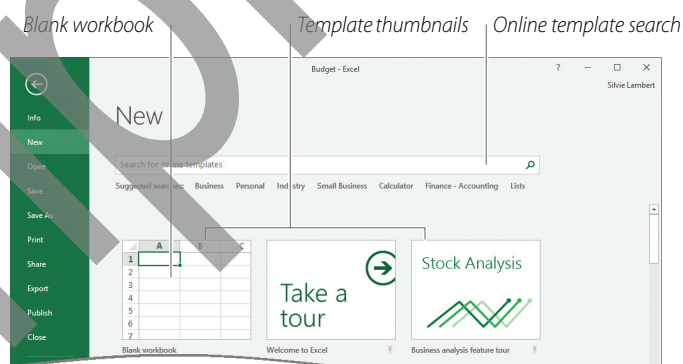
The following table outlines efficient ways to select cells and worksheets:

Cell	Click a cell.
Contiguous cells	Select the first cell, press SHIFT , and click the last cell to be selected.
Non-contiguous cells	Select the first cell, press CTRL , and click additional cells to be selected.
Row or column	Click the row or column heading of the row or column to be selected. Press SHIFT or CTRL and click the headings of additional rows or columns.
Current data area or entire worksheet	Press CTRL+A to select the current data area. Press a second time to select the entire worksheet, or click the Select All  button.
Worksheet	Click a worksheet tab.
Contiguous worksheets	Select the first worksheet, press SHIFT , and then click the last worksheet tab.
Non-contiguous worksheets	Select the first worksheet, press CTRL , and then click additional worksheet tabs.

Getting Started... cont'd

► Creating New Workbooks

1. Click the **File** tab, and then select **New**.



2. To create a new blank workbook, select **Blank workbook** from the list.

– OR –

To create a new workbook based on a sample template, select the desired template, and then click **Create**.

– OR –

To create a new workbook based on an online template (if you are connected to the Internet), select the desired category link in **Suggested searches**, select the desired template, and then click **Create**.


Note: If you have saved custom workbook templates (steps below), click the **Personal** link in **Suggested searches** (to list them), and then select the desired workbook template.

► Saving and Naming Workbooks

1. To save and name a workbook for the first time, do the following:

- Click the **File** tab, and then select **Save** or **Save As**.

– OR –

- Click the **Save**  button on the Quick Access Toolbar.

2. If required, navigate to the desired folder using the same method as for opening a workbook (See “Opening Workbooks” on page 2), and then type the desired file name.

3. If required, select a different file type from the **Save as type** list.

For example:

- Select **Excel 97-2003 Workbook** to allow the workbook to be opened using an older version of Excel.
- Select **PDF** or **XPS Document** to create a document that does not require Excel to open it.

Getting Started... cont'd

- Select **Excel Template** to save a workbook as a workbook template. Workbook templates generally contain headings, descriptions, formulas, data, and/or preformatted cells, which may be used to create other worksheets without losing the standard form of the template.
- 4. Click the **Save** button.

Note: Once a workbook has been saved, you may use the **Save As** command to create a copy of it with a different name, or to apply a different file type.

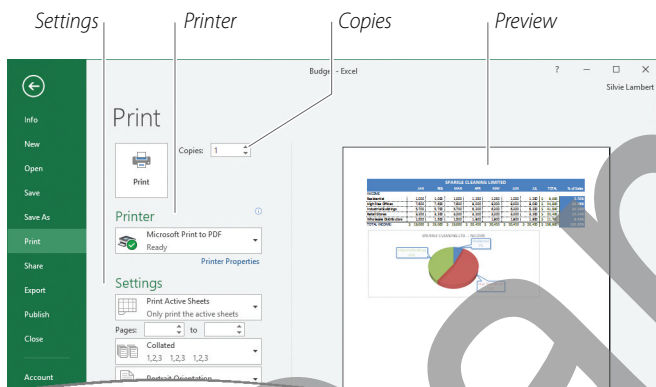
Closing Workbooks

- Click the **File** tab and select **Close**, or press **CTRL+F4**.

Note: Excel 2016 maintains multiple open workbooks within separate application windows. As a result, when multiple workbooks are open, closing a workbook is equivalent to closing the application. However, when the last workbook is closed, Excel is not closed.

Printing Workbooks

1. Click the **File** tab, and then select **Print**.
 2. Change the default print settings as required:
 - To change the printer, select the desired printer from the **Printer** drop-down list.
 - To change other print settings, select the desired setting from the appropriate item in the **Settings** area.
- Note:** The preview displays the workbook with all of the changed settings.
- To print multiple copies, change the number in the **Copies** text box.



3. Click the **Print** button.

Entering and Editing Data

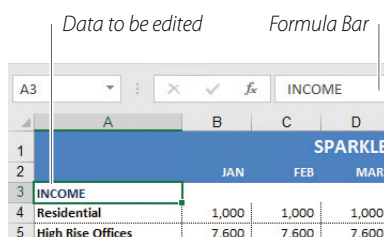
Entering Data

1. Select the cell(s) where data is to be entered and begin typing data.
2. Press **ENTER** or click the **Enter** button on the Formula Bar to insert the data.
 - If multiple cells are selected, the next cell in the range will become active, and you can repeat the process.
 - To cancel the operation, press **ESC** or click the **Cancel** button.

Editing Data

1. Select the cell containing the data to be edited.
2. Position the mouse pointer in the Formula Bar and click or press **F2** to activate **Edit** mode, which will appear on the Status bar.
3. Edit the content as required, and then press **ENTER**.

Note: If desired, you can replace the data in a cell (without using Edit mode) by entering new data to overwrite the current data.



Entering and Editing Data... cont'd

Adjusting Column Widths and Row Heights

1. Position the mouse pointer on the right border of the column heading to be adjusted.
 - OR –
 Position the mouse pointer on the bottom border of the row heading to be adjusted.
2. Drag the mouse to manually adjust the width or the height.
 - OR –
 Assuming the column or the row is too large or too small, double-click to automatically resize it.

Inserting and Deleting Columns and Rows

1. Select the column or row heading of the column(s) or row(s) to be inserted or deleted.
 - To insert new columns to the right of the selection, or new rows below the selection, click the **Insert** button in the **Home > Cells** group.
 - To delete the selected column(s) or row(s), click the **Delete** button in the **Home > Cells** group.

Moving and Copying Data

1. Select the cell(s) to be moved or copied.
2. Click the **Cut** button in the **Home > Clipboard** group to move data.
 - OR –
 Click the **Copy** button in the **Home > Clipboard** group to copy data.
3. Select the cell(s) where the data is to be moved or copied.
4. Click the **Paste** button in the **Home > Clipboard** group to insert the data.

Note: You can use a drag-and-drop method to move and copy data within the same worksheet. This is accomplished by positioning the mouse pointer on the border of selected data and dragging the selection to a new location to move it, or pressing **CTRL** while dragging to copy it.

Entering Data Series

1. Type the first entry or entries for the series, which can be values, months, days, years, etc.
2. If the desired result is to fill a linear value series, select both values as shown in row 2 to the right.
3. Drag the Fill handle of the selected area to adjacent cells to complete the series.

	A	B	C	D
1				
2	1	5		
3	Jan			
4	Mon			
5	2016			

Note: In the year example shown below, to achieve the same result, select **Fill Series** from the smart tag drop-down list.

	A	B	C	D	E
1					
2	1	5	9	13	17
3	Jan	Feb	Mar	Apr	May
4	Mon	Tue	Wed	Thu	Fri
5	2016	2017	2018	2019	2020
6					

Clearing Cell Contents

1. Select the cell(s) to be cleared.
2. To remove the contents of the selected cell(s), press the **DELETE** key.
 - OR –

To remove the contents, as well as other items, click the **Clear** drop-down button in the **Home > Editing** group, and then select the desired command.

Working with Formulas

Using Simple Functions to Create Formulas


1. Select the cell where the formula is to be entered. Type an equal (=) sign followed by the desired function and an open bracket, (e.g., **sum(**, **average(**, **min(**, **max(**, or **count(**).
 - OR –
 Click the **Sum** button in the **Home > Editing** group, and then select the desired function from the list that appears.

Working with Formulas... cont'd

2. Type or select the desired range of cells.

In the example shown, cells **B4** to **B8** are being summed in cell **B9**.

3. Press **ENTER** to insert the formula.

Note: You can click the **Insert Function**  button on the Formula Bar to obtain a list of all functions, their syntax, as well as function help.

SUM				
=SUM(B4:B8)				
	A	B	C	D
1	SPARKLE			
2		JAN	FEB	MAR
3	INCOME			
4	Residential	1,000	1,000	1,000
5	High Rise Offices	7,600	7,600	7,600
6	Industrial Buildings	5,700	5,700	5,700
7	Retail Stores	3,200	3,200	3,200
8	Wholesale Distributors	1,500	1,500	1,500
9	TOTAL INCOME:	=SUM(B4:B8)		\$ 19,000
10		SUM(number1, [number2], ...)		

▶ Creating Simple Formulas

1. Select the cell where the formula is to be entered, and then type an equal (=) sign.
2. Click the first cell containing a value that is to be included in the formula, or type the cell address, or type a value if required.
3. Type the desired mathematical operator such as an asterisk * (multiply), a forward slash / (divide), a plus sign + (add), or a minus sign - (subtract).
4. Repeat steps 2 and 3 as required.

In the example shown, cell **J4** is divided by **I9** to calculate the percentage of sales in cell **J4**.

5. Press **ENTER** to insert the formula.

Note: Remember that Excel uses the order of operations when performing calculations; so use brackets as required in a formula to perform calculations in a certain order such as **= (A1+A2)*A3**.

J4					
=I4/I9					
	F	G	H	I	J
1	ING LIMITED				
2		MAY	JUN	JUL	TOTAL
3					% of Sales
4	1,250	1,250	1,250	\$ 8,000	5.76%
5	8,000	8,000	8,000	\$ 54,800	
6	5,200	6,200	6,200	\$ 41,900	
7	3,200	3,200	3,200	\$ 22,400	
8	1,800	1,800	1,800	\$ 11,700	
9	\$ 20,450	\$ 20,450	\$ 20,450	\$ 138,800	

▶ Creating Absolute and Mixed Cell References

1. Position the insertion point in the Formula Bar, within the cell address that is to be absolute or a mixed reference.
 - To convert the entire reference to absolute, press **F4** once.
 - To convert the reference to a mixed reference (absolute row), press **F4** twice.
 - To convert the reference to a mixed reference (absolute column), press **F4** three times.

fx **=I4/\$I\$9**

Absolute

fx **=I4/IS9**

Mixed (absolute row)

fx **=I4/\$I9**

Mixed (absolute column)


Note: Pressing **F4** four times consecutively reverts the cell to a relative reference again.

▶ Creating Linking Formulas

1. Select the desired cell, and then type an equal sign (=).
 2. If creating a linking formula that is to reference data in another workbook(s), be sure that the source workbook(s) is open and the first workbook is activated.
 3. Select the desired cell(s).
 4. Insert mathematical operators as required.
 5. Repeat steps 2 to 4 as required, and then press **ENTER**.
- In the example shown, cell **B4** in **Sheet1** of the **Div1** and **Div2** workbooks is summed in cell **B4**.

B4						
=[Div1.xlsx]Sheet1!\$B\$4+[Div2.xlsx]Sheet1!\$B\$4						
	A	B	C	D	E	F
1	Imported Foods Company					
2	Divisions Consolidation					
3		Qtr1	Qtr2	Qtr3	Qtr4	Total
4	Beverage Goods	2,650				\$ 2,650
5	Fresh Produce					\$ -

Working with Formulas... cont'd

Note: The previous method produces an absolute cell reference(s) in the formula. As alternative methods, you could also directly type a linking formula to create it; or copy the desired data, click the **Paste** drop-down button in the **Home > Clipboard** group, and then click the **Paste Link**  button to insert the formula.

▶ Creating IF Statement Formulas

1. First, consider writing down the condition and a description of the calculations needed. For example, if sales (in cell F5) are greater than \$50,000, a \$5,000 bonus is awarded; otherwise "no bonus".
2. With the desired cell selected, type **=if(**.
3. Specify the condition from which the calculation(s) is to be performed, followed by a comma (e.g., **F5>50000,**).
4. Specify the calculation that is to be performed, or the value to be inserted if the condition is true, followed by a comma (e.g., **5000,**).
5. Specify the calculation that is to be performed, the value to be inserted, or the text string to be inserted if the condition is not true, followed by a closing bracket (e.g., **"No Bonus")**).
6. Press **ENTER**.

In the example shown, the references to "50000" and "5000" (above) have been replaced with cell references (A12 and B12) containing the values, which often simplifies creating the formula.

G5						
=IF(F5>=A12,B12,"No Bonus")						
	A	B	C	D	E	F
1	Imported Foods Company					
2	Summary Consolidation by Divisions					
3	Divisions with Total sales greater than \$50,000 receive a bonus of \$5,000.					
4		Qtr1	Qtr2	Qtr3	Qtr4	Total
5	Division 1	14,000	12,000	14,500	11,000	\$ 51,500
6	Division 2	9,000	8,000	10,000	12,000	\$ 39,000
7	Division 3	11,000	12,500	13,500	16,000	\$ 53,000
8	Division 4	13,000	17,000	12,000	18,000	\$ 60,000
9	Total	47,000	49,500	50,000	57,000	\$ 203,500
10						\$ 5,000
11	Sales Target	Bonus				
12	\$ 50,000	\$ 5,000				

Note: IF statement formulas can be nested. For example, **=IF(F5>50000,5000,IF(F5=40000,2000,"No Bonus"))**

▶ Consolidating Data from Different Workbooks

1. Open all of the source workbooks from which data is to be consolidated.
 2. Open or create a destination workbook.
- Note:** The source and destination workbooks generally maintain a consistent layout in terms of headings and data cells.
3. Navigate to the first source workbook; select and copy the desired data.

	A	B	C	D	E	F
1	Imported Foods Company					
2	Division 1					
3		Qtr1	Qtr2	Qtr3	Qtr4	Total
4	Beverage Goods	1,200	1,300	1,100	900	\$ 4,500
5	Fresh Produce	1,200	1,400	1,200	1,100	\$ 4,900
6	Packaged Goods	1,400	1,600	1,400	1,500	\$ 5,900
7	Fresh Seafood	1,600	1,900	1,700	1,400	\$ 6,600
8	Total	\$ 5,400	\$ 6,200	\$ 5,400	\$ 4,900	\$ 21,900

4. Navigate to the destination workbook, select the cell(s) where the consolidated data will be inserted, and paste it.
5. Navigate to another source workbook; select and copy the desired data.

	A	B	C	D	E	F
1	Imported Foods Company					
2	Division 2					
3		Qtr1	Qtr2	Qtr3	Qtr4	Total
4	Beverage Goods	1,450	1,550	1,350	1,150	\$ 5,500
5	Fresh Produce	1,450	1,650	1,450	1,350	\$ 5,900
6	Packaged Goods	1,650	1,650	1,650	1,750	\$ 6,700
7	Fresh Seafood	1,850	2,150	1,950	1,650	\$ 7,600
8	Total	\$ 6,400	\$ 7,000	\$ 6,400	\$ 5,900	\$ 25,700

6. Navigate to the destination workbook, select the cell(s) where the consolidated data will be inserted, click the **Paste** drop-down button in the **Home > Clipboard** group, and then select **Paste Special**.

Working with Formulas... cont'd

7. Select the desired mathematical operator from the *Operation* area of the *Paste Special* dialog box, and then click **OK**.

In the example shown, data from two different workbooks has been summed to consolidate it.

	A	B	C	D	E	F
1	Imported Foods Company					
2	Divisions Consolidation					
3		Qtr1	Qtr2	Qtr3	Qtr4	Total
4	Beverage Goods	2,650	2,850	2,450	2,050	\$ 10,000
5	Fresh Produce	2,650	3,050	2,650	2,450	\$ 10,800
6	Packaged Goods	3,050	3,250	3,050	3,250	\$ 12,600
7	Fresh Seafood	3,450	4,050	3,650	3,050	\$ 14,200
8	Total	\$ 11,800	\$ 13,200	\$ 11,800	\$ 10,800	

Formatting Data... cont'd**► Copying Formatting Using the Format Painter**

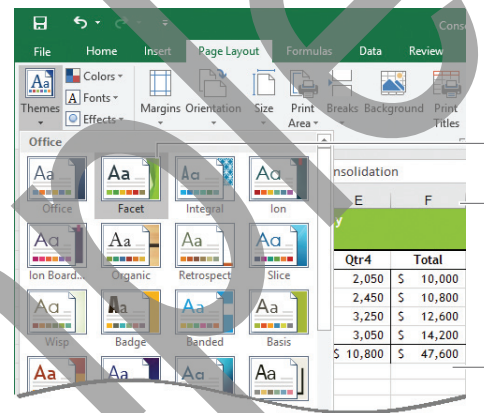
1. Select the cell containing the formats to copy.
2. Click the **Format Painter** button in the *Home > Clipboard* group to copy the formatting to a single location.
 - OR –
- Double-click the **Format Painter** button to copy the formatting to multiple locations.
3. Select the cell(s) to be formatted.
4. If required, click the **Format Painter** button again to turn it off.

► Applying Styles

1. Select the cell(s) to be formatted.
2. Click the **Cell Styles** button in the *Home > Styles* group, and then select the desired style.

► Applying Themes

1. Click the **Themes** button in the *Page Layout > Themes* group.
2. Point to a theme to preview its characteristics.
3. Click the desired theme to apply it.



Point to a theme to preview characteristics.

Note: A change in fonts will be the most noticeable difference assuming that formatting such as *Themed Cell Styles* is not applied.

► Applying Conditional Formatting

1. Select the cell(s) to be formatted.
2. Click the **Conditional Formatting** button in the *Home > Styles* group, and then select the desired format style.

Note: Some options allow you to define rules to apply formatting.

Managing Worksheets**► Freezing and Unfreezing Panes**

1. To freeze the top row or the first column only, click the **Freeze Panes** button in the *View > Window* group and select **Freeze Top Row** or **Freeze First Column**.
 - OR –

To freeze multiple panes, select the cell where the panes are to be frozen, click the **Freeze Panes** button in the *View > Window* group, and then select **Freeze Panes**.

In the example shown, panes have been frozen at cell **B3**. The data displayed is the last quarter expenses. Note the column and row headings.

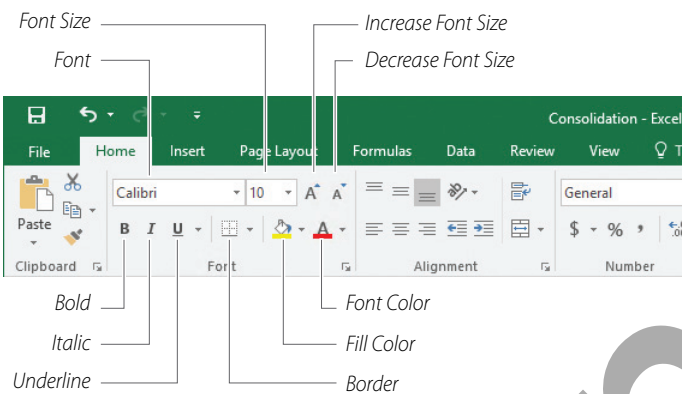
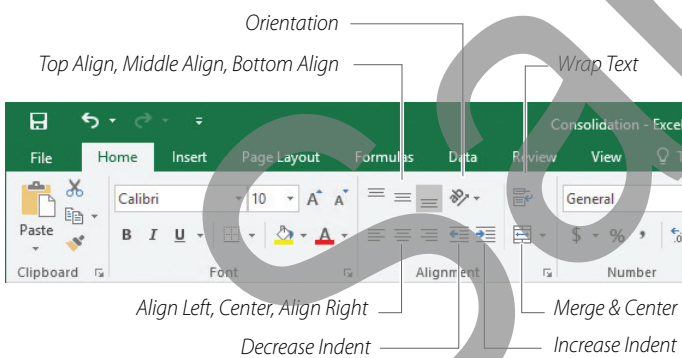
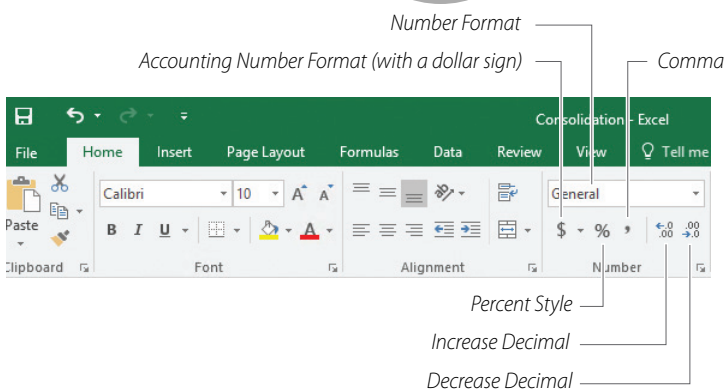
Frozen panes
(rows 1:3)
(column A)

	A	J	K	L	M	N	O
2		SEP	OCT	NOV	DEC	TOTALS	PERCENTAGE
11	EXPENSES						
12	Advertising	1,050	1,100	1,150	1,200	11,250	4.52%
13	Depreciation	200	200	200	200	2,400	0.97%
14	Insurance	600	600	600	600	7,200	2.90%
15	Miscellaneous	220	240	260	280	2,100	0.84%
16	Office Costs	350	375	400	425	3,525	1.42%
17	Rent & Utilities	800	800	800	800	9,600	3.86%
18	Salaries & Benefits	17,000	18,000	19,000	20,000	177,000	71.19%
19	Supplies	2,000	2,000	2,000	2,000	24,000	9.65%
20	Taxes	325	325	325	325	3,900	1.57%
21	Travel	750	800	850	900	7,650	3.08%
22	TOTAL EXPENSE	\$ 23,295	\$ 24,440	\$ 25,585	\$ 26,730	\$ 248,625	100.00%

- To unfreeze panes, click the **Freeze Panes** button and select **Unfreeze Panes**.

Formatting Data**► Formatting Cells**

1. Select the cell(s) to be formatted.
2. Click the desired format button or drop-down button from the appropriate group on the *Home* tab to apply the desired format.

Font group**Alignment group****Number group**

Managing Worksheets... cont'd

► Splitting and Unsplitting Windows

1. Select the cell where the window is to be split.
2. Click the **Split** button in the **View > Window** group.

In the example shown, the window has been split at cell **E10**. The data displayed is the total income and expenses, as well as the net income (loss) totals. Note the column and row headings.

Window borders

	A	B	C	D	K	L	M	N
1								
2		JAN	FEB	MAR				
3					OCT	NOV	DEC	TOTALS
4	INCOME							
5	Residential	1,200	1,200	1,200	1,550	1,600	1,650	16,650
6	High Rise Offices	7,600	7,600	7,600	10,400	10,800	11,200	109,200
7	Industrial Buildings	5,700	5,700	5,700	9,200	9,700	10,200	90,900
8	Retail Stores	3,200	3,200	3,200	3,900	4,000	4,100	42,900
9	Wholesale Distributors	1,500	1,500	1,500	3,600	3,900	4,200	31,500
10	TOTAL INCOME	\$ 19,200	\$ 19,200	\$ 19,200	\$ 28,650	\$ 30,000	\$ 31,350	\$ 291,150
22	TOTAL EXPENSE	\$ 16,425	\$ 16,425	\$ 16,425	\$ 24,440	\$ 25,585	\$ 26,730	\$ 248,625
24	NET INCOME (LOSS):	\$ 2,775	\$ 2,775	\$ 2,775	\$ 4,210	\$ 4,415	\$ 4,620	\$ 42,525


- To unsplit windows, click the **Split** button again.

Note: Window areas can be adjusted using the mouse. Drag the vertical window border left or right, and/or drag the horizontal border up or down as desired.

► Renaming Worksheets

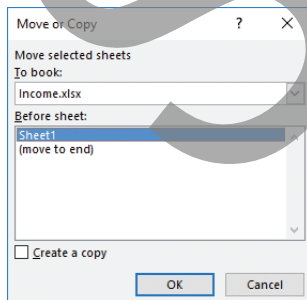
1. Click the sheet tab to be renamed, and then click the **Format** button in the **Home > Cells** group.
2. Select **Rename Sheet**, type the new sheet name (max. 31 characters), and then press **ENTER**.

► Inserting and Deleting Worksheets

- To insert a new worksheet, click the **New sheet**  button.
- OR –
- Click the **Insert** drop-down button in the **Home > Cells** group, and then select **Insert Sheet**.
- To delete a worksheet, click the tab of the sheet to be deleted, click the **Delete** drop-down button in the **Home > Cells** group, and then select **Delete Sheet**. If the worksheet contains data, click the **Delete** button to confirm the deletion.

► Moving and Copying Worksheets

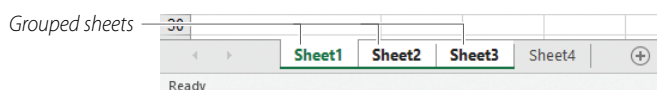
1. Right-click the tab of the worksheet to be moved or copied, and then select **Move or Copy**.
2. If the worksheet is to be moved or copied to another workbook, select the workbook from the **To book** drop-down list.
3. Select where the worksheet is to be positioned within other worksheets in the **Before sheet** list.



4. Enable the **Create a copy** check box to copy the worksheet.
5. Click **OK**.

► Grouping and Ungrouping Worksheets

1. Click the first worksheet tab that is to be part of the selected group.
2. To select a contiguous group of worksheets, press **SHIFT** and click the tab of the last worksheet to be included in the group.



Managing Worksheets... cont'd

– OR –

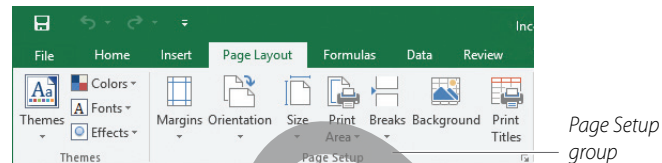
To select a non-contiguous group of worksheets, press **CTRL** and click individual worksheet tabs.



- To deselect a group of worksheets, right-click a selected tab, and then select **Ungroup Sheets**.

► Applying Page Setup Settings

1. Click the desired button in the **Page Layout > Page Setup** group.

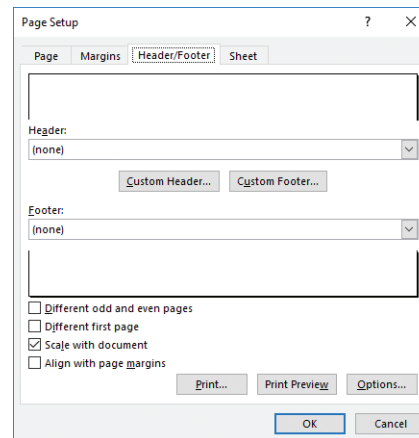


- To set up page margins, click the **Margins** button and select a predefined option, or click **Custom Margins** to apply other margin settings.
- To change the page orientation, click the **Orientation** button, and then select **Portrait** or **Landscape**.
- To select a paper size, click the **Size** button, and then select a predefined option.
- To set a print area, select the cells that are to be included in the print area, click the **Print Area** button, and then select **Set Print Area**. If required, you can select **Clear Print Area** to remove the current print area.

Note: The remaining **Page Setup** options may be used to insert and remove page breaks, insert a background image (similar to a watermark), and specify certain rows or columns that should be printed on each page.

► Inserting Headers and Footers

1. Click the **Dialog Box Launcher**  button in the **Page Layout > Page Setup** group, and then click the **Header/Footer** tab.



2. To insert header content, select the desired content arrangement from the **Header** drop-down list; or click the **Custom Header** button, insert the required content, and then click **OK**.

– OR –

To insert footer content, select the desired content arrangement from the **Footer** drop-down list; or click the **Custom Footer** button, insert the required content, and then click **OK**.

3. Click **OK** to close the **Page Setup** dialog box.

Note: You can also insert header and footer content directly into a worksheet while in Page Layout view. Click the **Page Layout** button in the **View > Workbook Views** group. Then click the area where header and/or footer content is to be inserted.

Working with Charts

► Creating Charts

1. Select the cells (data range) to be charted.

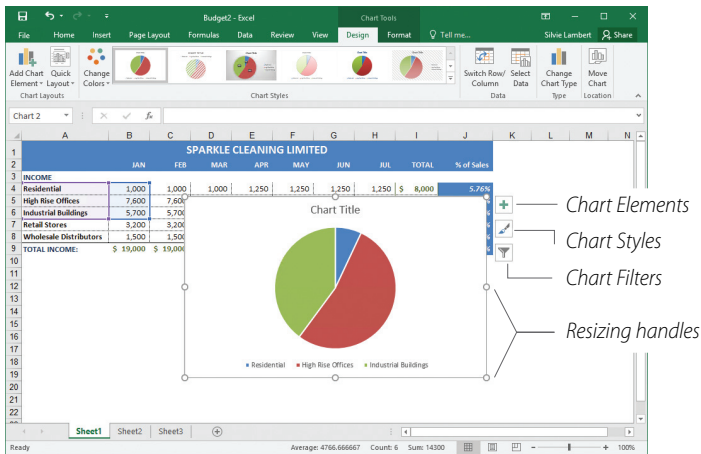
Note: The selected data range may consist of non-contiguous cells, which is common when creating pie charts.

2. Click the desired chart type button in the **Insert > Charts** group, and then select the desired chart subtype.

– OR –

Click the **Recommended Charts** button in the **Insert > Charts** group, select a recommended chart type from the pane on the left, and then click **OK**.

Note: After a chart is created, it remains selected, displaying various buttons used to modify and resize the chart as shown below.



► Resizing and Moving Charts

1. To resize a chart both vertically and horizontally simultaneously, position the mouse pointer on any of the four resizing handles at the **Chart Area** corners and drag to the desired size.

– OR –

To resize a chart vertically or horizontally, position the mouse pointer on any of the four resizing handles on the **Chart Area** border and drag to the desired size.

- To move a chart on a worksheet, position the mouse pointer on the **Chart Area** border and drag to the desired location.

► Modifying and Formatting Charts

1. Click the chart to select it.

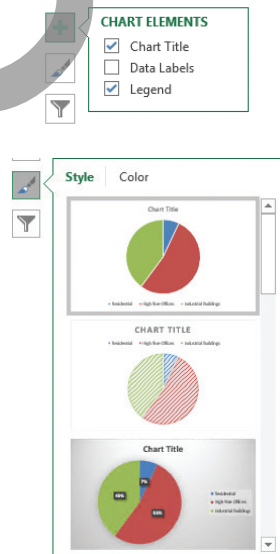
- To change the chart type, click the **Change Chart Type** button in the **Design > Type** group, and then select the desired chart type from the pane.

- To add or remove chart elements, click the **Chart Elements** button that appears to the right of the selected chart, and then enable or disable the desired element check box.

- To change the chart style, click the **Chart Styles** button that appears beside the selected chart, and then select the desired chart style from the pane.

- To apply a quick layout, click the **Quick Layout** button in the **Design > Chart Layouts** group, and then select the desired layout.

Note: Additional and common formatting commands are available on the **Format** tab.



Working with Charts... cont'd

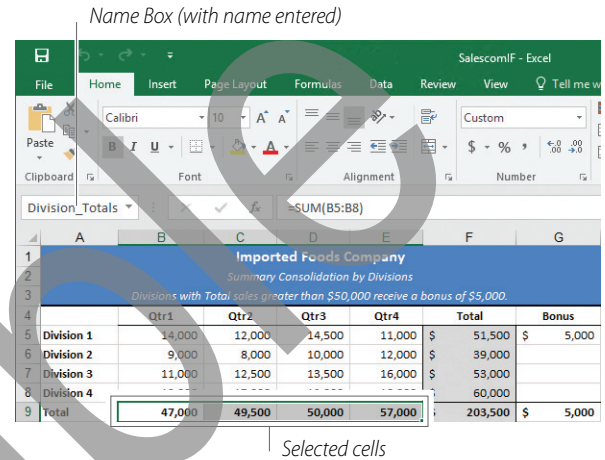
► Creating and Applying Custom Chart Templates

1. Create and design the chart as desired.
2. Right-click the chart, and then select **Save as Template**.
3. Type a file name, and then click the **Save** button.
 - To apply a custom chart template (with the chart selected), click the **Change Chart Type** button in the **Design > Type** group, click the **Templates** folder, select the desired chart template from the **My Templates** list, and then click **OK**.

Organizing Worksheets

► Creating Individual Range Names

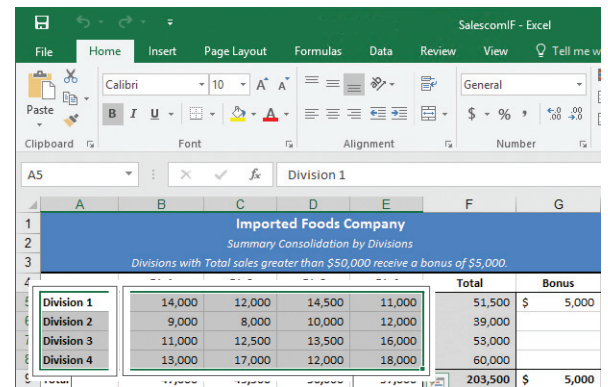
1. Select the cell(s) to be named.
2. Click in the **Name Box**, type the desired name, and then press **ENTER**.



Note: Range names should start with a letter, and may contain almost any character except spaces. They should not look like a cell reference (e.g., B2 or R2C2); nor should they use Excel function names or other reserved words (e.g., SUM, IF, etc.).

► Creating Multiple Range Names

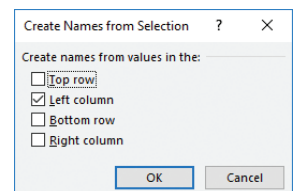
1. Select the cells to be named, including the cells containing labels along the top, bottom, right, or left of the selected range.



2. Click the **Create from Selection** button in the **Formulas > Defined Names** group.

Note: The appropriate check box(es) appears enabled (based on the selection in step 1) in the **Create Names from Selection** dialog box.

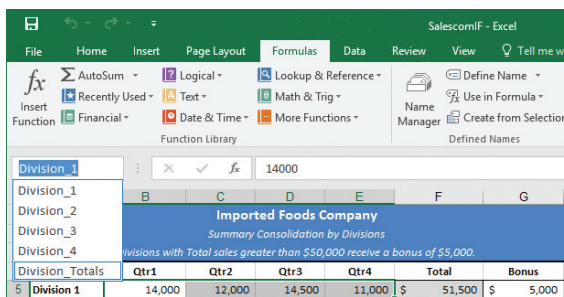
3. Click **OK**.



Organizing Worksheets... cont'd

► Locating and Inserting Range Names

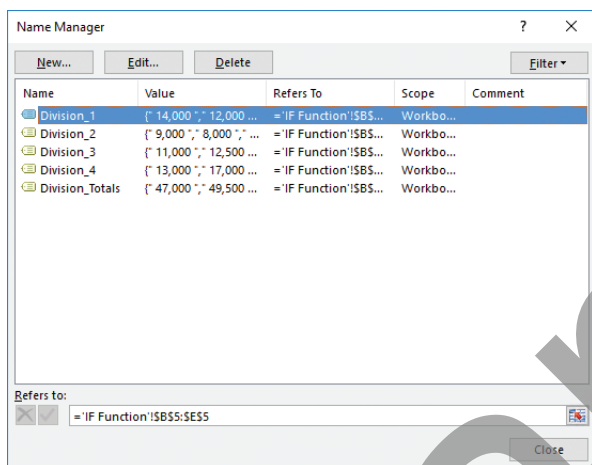
- To locate a named range area, click the **Name Box** drop-down button (shown below) or press **F5**, and then click the desired range name.



- To insert a range name in a formula, click the **Use in Formula** button in the **Formulas > Defined Names** group, and then select the desired range name.

► Editing and Deleting Range Names

- Click the **Name Manager** button in the **Formulas > Defined Names** group, and then select the range name to be edited or deleted.



- Click the **Edit** button, modify the details such as the name or the cell address as required, and then click **OK** to return to the **Name Manager** dialog box.
 - OR –
 - Click the **Delete** button, and then select **OK** to confirm the deletion.
- Click **Close** to return to the worksheet.

► Unlocking Cells and Applying Worksheet Protection

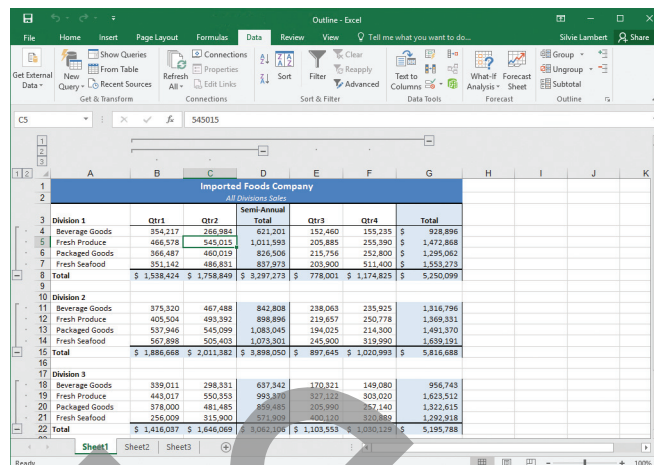
- Select the cells to be unlocked.
 - Note:** Such cells are to remain editable after worksheet protection has been enabled.
- Click the **Format** button in the **Home > Cells** group, and then select **Lock Cell**, which is currently enabled to unlock the selected cells.
- Click the **Format** button in the **Home > Cells** group, and then select **Protect Sheet**.
- Enable and/or disable the desired check boxes to allow or prevent access to particular tasks.
- If desired, specify a password to prevent users from turning off worksheet protection.
- Click **OK** to turn on worksheet protection.
 - Note:** Reverse these steps to unprotect a worksheet and re-lock cells.

► Generating Auto Outlines

- Select the range to be outlined.
- Click the **Group** drop-down button in the **Data > Outline** group, and then select **Auto Outline**.

Organizing Worksheets... cont'd

Note: If a range is not selected, the entire worksheet will be outlined automatically, as shown below.



► Manually Grouping and Ungrouping Outline Levels

- Select the rows or columns to be grouped or ungrouped in an outline.

Two columns selected

The Excel worksheet shows two columns selected for grouping. The selection is highlighted in blue.

	A	B	C	D
1				
2				
3	Division 1	Qtr1	Qtr2	Semi-Annual Total
4	Beverage Goods	354,217	266,984	621,201
5	Fresh Produce	466,578	545,015	1,011,593
6	Packaged Goods	366,487	460,019	826,506
7	Fresh Seafood	351,142	486,831	837,973
8	Total	\$ 1,538,424	\$ 1,758,849	\$ 3,297,273

- To group the selected rows or columns, click the **Group** drop-down button in the **Data > Outline** group, and then select **Group**.

Outline symbols appear as a result of manually grouping columns

The Excel worksheet shows the outline symbols after grouping columns. The symbols are visible in the top-left corner of the data range.

	A	B	C	D
1				
2				
3	Division 1	Qtr1	Qtr2	Semi-Annual Total
4	Beverage Goods	354,217	266,984	621,201
5	Fresh Produce	466,578	545,015	1,011,593
6	Packaged Goods	366,487	460,019	826,506
7	Fresh Seafood	351,142	486,831	837,973
8	Total	\$ 1,538,424	\$ 1,758,849	\$ 3,297,273

- To ungroup the selected rows or columns, click the **Ungroup** drop-down button in the **Data > Outline** group, and then select **Ungroup**.

► Displaying and Navigating Outline Levels

- Click a **+** to display a collapsed row or column group.
- Click a **-** to hide a row or column group.
- Click a row level **1 2** to display specific group levels of data in an outline. For example, click the row level **2** to hide all rows below 2.
- Click a column level **1 2** to display specific levels of data in an outline. For example, click the column level **2** to hide all columns below 2.

► Clearing Outlines

- Click the **Ungroup** drop-down button in the **Data > Outline** group, and then select **Clear Outline**.

For additional product information, visit our website at www.LearnDell.com, or email US_Training@dell.com.