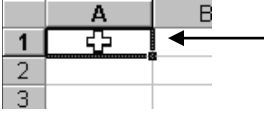
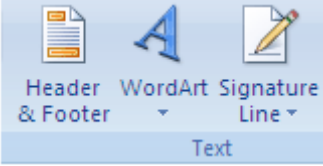
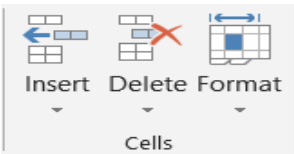


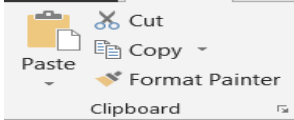



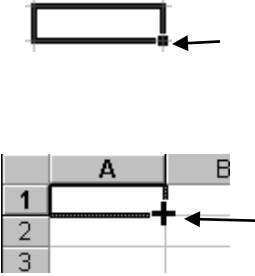


**Excel 1**  
Microsoft Excel 2013

<i>Action</i>	<i>Technique</i>
<p><b>1. Find the Active Cell</b></p>	<p>Look for the cell with the dark border around it. This is the active cell and it is ready for you to type in it. The <i>cell address</i> of the active cell appears at the left-hand side of the formula bar. The cell address is always column-letter first then row number. For example, cell A1 is the first cell in the spreadsheet. Cell addresses are used in formulas to identify specific cells.</p>
<p><b>2. Highlight or Select a Cell</b></p> 	<p>To highlight one cell, place the pointer in the middle of the cell and click. To highlight a range of cells, click in the middle of the first cell, hold your index finger down and drag over the remaining cells.</p> <p>The thick plus sign is the pointer icon for working with cells.</p>
<p><b>3. Move from Cell to Cell</b></p>	<ul style="list-style-type: none"> <li>• Click in the middle of a cell and it will become the active cell.</li> <li>• Use the arrow keys on your keyboard to go to another cell.</li> <li>• Page Up/Page Down keys moves the active cell one full screen height up or down.</li> <li>• The <b>Home</b> key moves the active cell to Column A, keeping it in the same row.</li> <li>• Ctrl+Home will take you to the cell to A1.</li> </ul>
<p><b>4. Enter Information or Numbers</b></p>	<ol style="list-style-type: none"> <li>1. Click once to highlight/select the cell where you want to enter data.</li> <li>2. Type the number or word(s). Press the <i>Enter</i> key to complete the data entry and move down one row. Type the next number or word and hit <i>Enter</i>. This will build a <b>column</b> of information. It is the fastest way to enter data.</li> <li>3. To enter data moving from left to right, press the <b>Tab</b> key to accept the data into the cell and move to the next cell to the right. Repeat these steps to enter a <b>row</b> of data.</li> </ol> <p>Note: Text will be left-aligned by default, while values (numbers) will be right-aligned. You can change the alignment by highlighting cell(s) and choosing an alignment option from the alignment group. <b>If you want to enter a number or date and have Excel "see" it as non-numeric, first type the apostrophe ( ' ) symbol.</b></p>
<p><b>5. Page Setup</b></p>	<p>The <b>Page Layout</b> tab on the <i>Ribbon</i> includes <b>Margins</b>, <b>Page Orientation</b>, and other <b>Sheet Options</b>. You can <b>center the data horizontally and/or vertically</b> from the <b>Margins Tab</b> by clicking on <b>Margins</b> then <b>Custom Margins</b>.</p> <p>The <b>Page Setup Dialog Box Launcher</b> has four tabs: <b>Page</b>, <b>Margins</b>, <b>Header/Footer</b>, and <b>Sheet</b>. It also allows access to <b>Print Preview</b>. The <b>Page</b> tab</p>

	<p>allows the data scale to be adjusted so the data may be enlarged or shrunk. The data may be printed to <b>fit to</b> X pages wide by X pages tall.</p>
<p><b>6. Add or Edit Header/Footer</b></p> 	<p>Click the worksheet to which you want to add headers or footers, or that contains headers or footers that you want to change.</p> <p>On the <b>Insert</b> tab, in the <b>Text</b> group, click <b>Header &amp; Footer</b>.</p> <p>Type the text that you want.</p> <p>To change a header or footer, click the header or footer text box at the top or at the bottom of the worksheet page that contains header or footer text, and then select the text that you want to change and type the text that you want.</p> <p>To start a new line in a header or footer text box, press ENTER.</p> <p>To delete a portion of a header or footer, select the portion that you want to delete in the header or footer text box, and then press DELETE or BACKSPACE.</p> <p>To close the headers or footers, click anywhere in the worksheet.</p> <p>Excel displays the worksheet in <b>Page Layout</b> view.</p> <p>To return to <b>Normal</b> view, on the <b>View</b> tab, in the <b>Workbook Views</b> group, click <b>Normal</b>.</p> <p><b>Note: The Header/Footer will not be displayed in the Normal view, even though they are still there.</b></p>
<p><b>7. Switch Between Worksheets</b></p>	<p>Each worksheet has a tab at the bottom with its name on it. Click on a tab to make that worksheet active. If you have many worksheets, use the sideways triangle symbols to move right and left among the worksheets.</p>
<p><b>8. Insert a Worksheet</b></p>	<p>You may have as many worksheets as you want. From the <b>Home</b> tab, click on <b>Insert</b> then <b>Insert sheet</b>. You can also <b>right-click</b> on the <b>sheet tab</b> to bring up a menu of options and then <b>left click</b> on <b>Insert</b>. You can also click the plus sign next to the sheet tab at the bottom of the screen.</p>
<p><b>9. Delete a Worksheet</b></p>	<p>From the Home tab, click on Delete, then <b>Delete sheet</b>. You can also <b>right-click</b> on the <b>sheet tab</b> to bring up a menu of options and then <b>left-click</b> on <b>Delete</b>.</p>
<p><b>10. Change Data Already Entered</b></p>	<p>To remove the contents of the active cell, press the <b>Delete</b> key on the keyboard. To replace a cell's contents with new information, click on the cell and begin typing. To edit data in a cell without erasing the cell's contents, <b>double click</b> in the cell to enter edit mode. The cell now contains an insertion point. Make the desired changes then press <b>Enter</b>.</p> <p>You can also click in the cell you want to edit and then make the correction in the <b>formula bar</b>.</p>
<p><b>11. Highlight a Group of Cells or Range</b></p>	<p>Hold the pointer over the center of the first cell you want to highlight or select. Press the left mouse button and hold it down. Now drag the mouse to highlight all the cells you want, then release the button. This is called Click-</p>

	<p>and-Drag.  <b>A group of cells is called a range.</b> The range is described as “the first cell to the last cell.” The range is represented in Excel language as “B3:F3.” <b>The colon means “to.”</b></p>
<p><b>12. Highlight Entire Rows or Columns</b></p>	<p>Click on the row number or the column letter. The entire row or column will be highlighted. To highlight several rows or columns that <b>are next to one another</b>, click and drag from the first to last column in the grey area. To highlight several rows or columns that are <b>not</b> next to one another, hold down the <b>Ctrl</b> key and click each row or column header.</p>
<p><b>13. Change the Height of a Column</b></p>	<p>To change column width, place the mouse pointer at the junction between any two column letters at the top of the columns. When you see the <b>double arrow</b>, click and drag the column’s vertical border to the desired column width. To make the column automatically fit its largest entry, double click while you see the above double arrow. To change a group of columns, highlight them. From the <b>Home</b> tab, click <b>Format</b> in the <b>Cells</b> group then click <b>AutoFit Column Width</b>.</p>
<p><b>14. Change the Row Height</b></p>	<p>To change the row height of one row, drag the boundary below the row heading until the row is the height that you want. You can also select the row or rows that you want to change. Then from the <b>Format</b> menu in the <b>Cells</b> group, choose <b>AutoFit Row Height</b>.</p>
<p><b>15. Insert a Cell, Row or Column</b></p> 	<p>Select the cell or the range of cells where you want to insert the new blank cells. On the <b>Home</b> tab, in the <b>Cells</b> group, click the arrow next to <b>Insert</b>, and then click <b>Insert Cells</b>.</p> <p>To insert a <b>single</b> row, select the row or a cell in the row below which you want to insert the new row. For example, to insert a new row above row 5, click a cell in row 5.</p> <p>To insert multiple rows, select the rows above which you want to insert rows. <b>Select the same number of rows as you want to insert.</b> For example, to insert three new rows, you need to select three rows.</p> <p><b>To insert nonadjacent rows, hold down CTRL while you select nonadjacent rows.</b></p> <p>Select the row below which you want to insert the new row. Click on the <b>Insert</b> menu, then <b>Rows</b>. The new row will appear above the original row.</p> <p>To insert a single column, select the column or a cell in the column immediately to the right of where you want to insert the new column. For example, to insert a new column to the left of column B, click a cell in column B.</p> <p>To insert multiple columns, select the columns immediately to the right of where you want to insert columns. <b>Select the same number of columns as you want to insert.</b> For example, to insert three new columns, you need to select three columns.</p> <p><b>To insert nonadjacent columns, hold down CTRL while you select nonadjacent columns.</b></p> <p>On the <b>Home</b> tab, in the <b>Cells</b> group, click the arrow next to <b>Insert</b>, and then click <b>Insert Sheet Columns</b>.</p> <p>You can also <b>right-click</b> the selected cells and then click <b>Insert</b> on the shortcut menu.</p>

<p><b>16. Delete Cells, Rows, or Columns</b></p>	<p>Highlight or select the cells, rows or columns that you want to delete. On the <b>Home</b> tab, in the <b>Cells</b> group, do one of the following:</p> <ul style="list-style-type: none"> <li>• To delete selected cells, click the arrow next to <b>Delete</b>, and then click <b>Delete Cells</b>.</li> <li>• To delete selected rows, click the arrow next to <b>Delete</b>, and then click <b>Delete Sheet Rows</b>.</li> <li>• To delete selected columns, click the arrow next to <b>Delete</b>, and then click <b>Delete Sheet Columns</b>.</li> </ul> <p>You can also <b>right-click</b> a selection of cells, rows, or columns, click <b>Delete</b> on the shortcut menu, and then click the option that you want.</p>
<p><b>17. Cut , Copy &amp; Paste</b></p> 	<p>Highlight or select the cells that you want to move or copy. On the <b>Home</b> tab, in the <b>Clipboard</b> group, do one of the following:</p> <ul style="list-style-type: none"> <li>▪ To move cells, click <b>Cut</b> .</li> <li>▪ To copy cells, click <b>Copy</b> .</li> </ul> <p>On the <b>Home</b> tab, in the <b>Clipboard</b> group, click <b>Paste</b> .</p>
<p><b>18. Move Data Between Rows and Columns</b></p>	<p>Copy the data in one or more columns or rows. Before you paste the copied data, right-click your first destination cell (the first cell of the row or column into which you want to paste your data), and then click <b>Paste Special</b>. In the <b>Paste Special</b> dialog box, select <b>Transpose</b>, and then click <b>OK</b>.</p>
<p><b>19. Copy a Formula with the Fill Handle</b></p> 	<p>When Excel copies a formula, it automatically changes the column and row references. For example, an autosum formula copied from column A to column B will be changed as follows. The cell range will change from Sum(a1:a14) to Sum(b1:b14).</p> <p>The <b>Fill Handle</b> is faster than using the <i>Copy and Paste</i> method. Click on the cell containing the formula to be copied. Position your pointer on the little square or <i>handle</i> in the lower right corner of the active cell.</p> <p>When you see the “thin plus” symbol (shown at left), click-and-drag vertically or horizontally to fill additional cells with a formula.</p> <p><b>Note: This only works when the cells are contiguous.</b></p>


## Excel's Order of Calculation


20. Math Symbols	Operation	Symbol	Example	Order
	Parentheses	( )	=(4+2)*8	1st
	Exponents	^	=3^4 (3 to the fourth power)	2nd
	Multiplication	*	=4*6	3rd
	Division	/	=8/2	3rd
	Addition	+	=5+5	4th
	Subtraction	-	=3-1	4th

## Formulas

<p><b>21. Type a Formula from Scratch</b></p>	<ol style="list-style-type: none"> <li>1. Highlight the desired cell and type the equals sign (=). This is the signal to Excel that what comes after is a formula or function.</li> <li>2. Type the first cell name</li> <li>3. Type the arithmetical operator (+, -, *, /, ^)</li> <li>4. Type the next cell name and the arithmetical operator, etc...</li> <li>5. When done writing formula, press <i>Enter</i>. The result is displayed in the cell.</li> </ol> <p>Reminder: When writing your formulas, remember the order of operations!</p> <p>Note: After entering the formula, the formula will appear only in the "formula bar." The solution to the formula will show in the cell itself.</p>
<p><b>22. Why Parentheses are Critical</b></p>	<p>Operations enclosed in parentheses will be performed before other operations. For example, <math>(4+3)*8</math> is not the same as <math>4+3*8</math>.</p> <p><b>A) <math>(4+3)*8=56</math>:</b> Excel performs operations in parentheses ( ) first, so Excel first adds <math>4+3=7</math> and <i>then</i> performs the multiplication of <math>7*8=56</math>.</p> <p><b>B) <math>4+3*8=28</math>:</b> Excel looks first for ( )'s, and because it does not find any, the program performs the multiplication first, so <math>3*8=24</math>, and then Excel performs the addition, so <math>4+24=28</math>.</p>



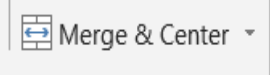
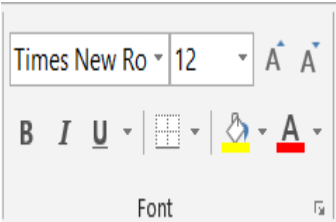


## Functions

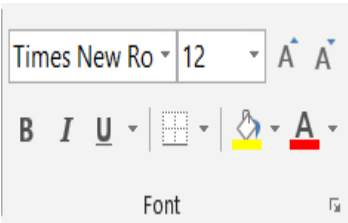

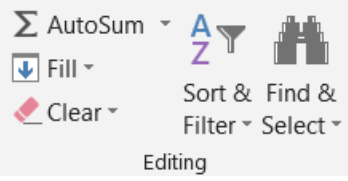

<p><b>23. Function Basics</b></p>	<p>Excel can perform many functions that are predetermined mathematical tasks including sums, averages and counting. Like formulas, functions start with the equals sign and use cell ranges to refer to groups of cells. For example, A1:A3 stands for "The cells from A1 through A3."</p> <p>The basic structure of a function is: <b>=Function Name (Cell Range)</b>. For example, <b>=SUM(A1:A3)</b> will produce the same numerical result as <b>=A1+A2+A3</b>. Insert or type functions in the cells where you want the answers to appear.</p> <p>All functions are available through the Insert menu and the function command.</p> <p>You can also access all the functions by clicking on the function tool. </p>	
<p><b>24. Insert a Function</b></p>	<p>Use the <b>Insert Function</b> dialog box to help you insert the correct formula and arguments for your needs.</p> <p>Type a brief description of what you want a function to do, and then click <b>Go</b>. A list of functions likely to fit your needs and based on your description will display in the <b>Select a function</b> box.</p> <p>Select <b>Most Recently Used</b>. Functions you have inserted in the recent past will display in the <b>Select a function</b> box.</p> <p>Select a function category. Functions in that category will display in alphabetical order in the <b>Select a function</b> box.</p> <p>Select <b>All</b>. Every function will display in alphabetical order in the <b>Select a function</b> box.</p>	
<p><b>25. Commonly Used Functions</b></p>	<p><b>Name and Syntax</b></p>	<p><b>Description</b></p>
<p>=SUM(A1:A3)</p>	<p>Gives the sum of all cells found within the given range.</p>	
<p>=AVERAGE(A1:A3)</p>	<p>Gives the average of all cells found within the given range.</p>	
<p>=MAX(A1:A3)</p>	<p>Gives the maximum value found within the given range.</p>	
<p>=MIN(A1:A3)</p>	<p>Gives the minimum value found within the given range.</p>	
<p>=COUNT(A1:A3)</p>	<p>Counts the cells within the range which contain numerical values</p>	

<p><b>26. AutoSum Function</b></p> 	<p>The addition of a column or a row of numbers is simple enough for Excel to make the calculation automatically. Most often, this is done at the bottom of a column or at the right of a row of <u>contiguous</u> numbers.</p> <p>Highlight the cell where you want the sum of two or more numbers to appear. From the Home tab click on the <b>Autosum</b> icon in the <b>Editing</b> group. Hit <b>Enter</b>.</p> <p>If you highlight a row of numbers without pre-selecting the cell for your answer, Excel will place it in the first open cell.</p>
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**Format**

*Cells must be highlighted prior to formatting!*

<p><b>27. Bold and Center Column Labels</b></p>	<p>Highlight the cells that label the contents of each column. Click on the <b>Bold</b> tool  from the <b>Font</b> group and <b>Center</b> tool  from the <b>Alignment</b> group.</p>
<p><b>28. Merge and Center Several Cells</b></p> 	<p>To center your title over all the data, type your title, highlight the cells in one row which cover all the columns of data. On the <b>Home</b> tab, in the <b>Alignment</b> group, click <b>Merge and Center</b>.</p> <p>The cells will be merged in a row or column, and the cell contents will be centered in the merged cell. To merge cells without centering, click the arrow next to <b>Merge and Center</b>, and then click <b>Merge Across</b> or <b>Merge Cells</b>.</p>
<p><b>29. Change Font</b></p>	<p><b>Highlight the data.</b> On the <b>Home</b> tab, in the <b>Font</b> group click on the desired font type, size and style.</p>
<p><b>30. Allow text to wrap to a 2nd line in a cell</b></p>	<p>If you want text to appear on multiple lines in a cell, you can format the cell so that the text wraps automatically. In a worksheet, select the cells that you want to format.</p> <p>On the <b>Home</b> tab, in the <b>Alignment</b> group, click <b>Wrap Text</b>.</p>
<p><b>31. Change Text Color</b></p> 	<p>Select the cell, range of cells, text, or characters that you want to format with a different text color. On the <b>Home</b> tab, in the <b>Font</b> group, do one of the following:</p> <p>To change the text color, click the arrow next to <b>Font Color</b> , and then under <b>Theme Colors</b> or <b>Standard Colors</b>, click the color that you want to use.</p> <p>To apply the most recently selected text color, click <b>Font Color</b> .</p> <p>To apply a color other than the available theme colors and standard colors, click <b>More Colors</b>, and then define the color that you want to use on the <b>Standard</b> tab or <b>Custom</b> tab of the <b>Colors</b> dialog box.</p>
<p><b>32. Show or Hide Gridlines on a Worksheet</b></p>	<p>On the <b>Page Layout</b> tab, in the <b>Sheet Options</b> group, under <b>Gridlines</b> click on <b>View</b> to place a check in the box before it.</p>

<p><b>33. Change Background Color of text</b></p> 	<p>Select the cell, range of cells, text, or characters that you want to format with a different background color. On the <b>Home</b> tab, in the <b>Font</b> group, do one of the following:</p> <ul style="list-style-type: none"> <li>To change the background color, click the arrow next to <b>Fill Color</b> , and then under <b>Theme Colors</b> or <b>Standard Colors</b>, click the background color that you want to use.</li> <li>To apply the most recently selected background color, click <b>Fill Color</b>.</li> <li>To apply a color other than the available theme colors and standard colors, click <b>More Colors</b>, and then define the color that you want to use on the <b>Standard</b> tab or <b>Custom</b> tab of the <b>Colors</b> dialog box.</li> </ul>
<p><b>34. Sort Text</b></p> 	<p>Select a column of alphanumeric data in a range of cells. On the <b>Home</b> tab, in the <b>Editing</b> group, click <b>Sort &amp; Filter</b> and then do one of the following:</p> <ul style="list-style-type: none"> <li>To sort in ascending alphanumeric order, click <b>Sort A to Z</b>.</li> <li>To sort in descending alphanumeric order, click <b>Sort Z to A</b>.</li> </ul>
<p><b>35. Sort Numbers</b></p>	<p>Select a column of numeric data in a range of cells. On the <b>Home</b> tab, in the <b>Editing</b> group, click <b>Sort &amp; Filter</b>, and then do one of the following:</p> <ul style="list-style-type: none"> <li>To sort from low numbers to high numbers, click <b>Sort Smallest to Largest</b>.</li> <li>To sort from high numbers to low numbers, click <b>Sort Largest to Smallest</b>.</li> </ul>
<p><b>36. Print With or Without Gridlines</b></p>	<p>To make a printed worksheet or workbook easier to read, you can print the worksheet or workbook with gridlines displayed around the cells.</p> <ol style="list-style-type: none"> <li>Select the worksheet or worksheets that you want to print.</li> <li>On the <b>Page Layout</b> tab, in the <b>Sheet Options</b> group, select the <b>Print</b> check box under <b>Gridlines</b>.</li> <li>Click <b>File</b>, and then click <b>Print</b>.</li> </ol> <p>Worksheets print faster if you print without gridlines.</p>
<p><b>37. Print</b></p>	<p>Click on <b>File</b> and then <b>Print</b>. If you do not change any print settings, Excel will print the worksheet currently open. To print the entire workbook (more than one sheet), click the triangle under <b>Settings</b> and chose <b>Entire Workbook</b>. Click <b>Print</b>.</p>
<p><b>38. Print by Selection or Print area</b></p>	<p>To print some, but not all, of a worksheet, highlight the desired data. Click on <b>File</b>, then <b>Print</b>, then under <b>Settings</b> choose the <b>Selection</b> setting. Only the print area selected will print.</p>
<p><b>39. Help</b></p> 	<p>Click the <b>Help</b> icon on the top right hand corner. You can type a search term in the box with the blinking cursor and hit enter or click on Search. You can also “Browse Excel Help” or click on any of the links in the Table of Contents.</p>