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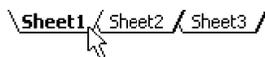
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EXCEL BASICS TRAINING

There is usually more than one way to perform a certain function in Excel but only one or two ways to perform each function will be shown in this guide.

Starting Microsoft Excel

1. Double Click on the **Microsoft Excel** icon OR
2. Click the **Start** button in the lower left-hand corner of the screen.
3. Click on **All Programs, Microsoft Office**.
4. Locate and click on the **Microsoft Excel** icon. A new blank Workbook will be displayed. The basic Workbook contains three separate Worksheets by default.



Opening an Existing Workbook

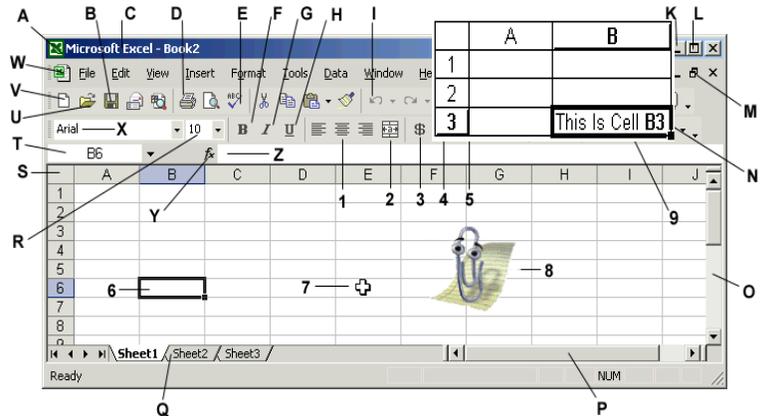
To open a previously saved workbook:

1. Select **Open** from the **File** menu or click the **Open** button. The Open dialog box appears.

2. Select the proper drive, folder, and workbook file.
3. Click the **Open** button.

Worksheet Basics

Worksheets are divided vertically by **Columns** and horizontally by **Rows**. Columns are labeled across the top with letters while rows are labeled along the left side with



numbers. Where columns and rows intersect, they create rectangles called **Cells**. Cell labels are identified by the Column letter and the Row number. For example, the cell that appears in Column **B** and Row **3** is known as **Cell B3** or the **Cell address is B3**. The dark box around cell B3 shows that it has been selected or highlighted.

Excel Workbook Layout



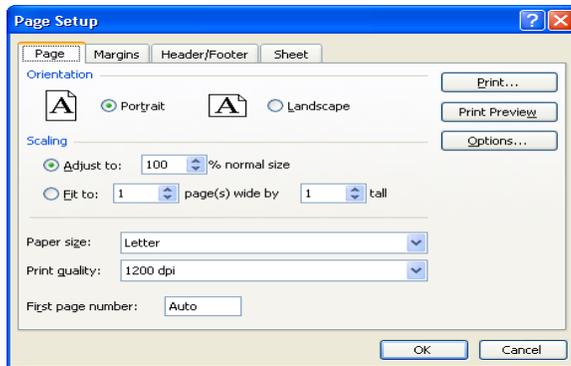
- | | | |
|--|---|--------------------------------------|
| A. Excel System Menu Icon | M. Restore Button | X. Change Font |
| B. Save Button | N. Zoom In/Zoom Out | Y. Function Button |
| C. Workbook Title | O. Vertical Scroll Bar | Z. Formula Bar |
| D. Print Button | P. Horizontal Scroll Bar | 1. Center Text In Cells |
| E. Spell Check Button | Q. Worksheets Tabs | 2. Center Text Across Columns |
| F. Bold Text Button | R. Change Font Size Button | 3. Currency Style |
| G. Italic Text Button | S. Select All Cells Button | 4. Percent Style |
| H. Underline Text Button | T. Cell Location | 5. Comma Style |
| I. Undo/Undelete Button | U. Open Document Button | 6. Selected Cell |
| J. Pull-Down Menu Headings (Help) | V. Create Document Button | 7. Mouse Cursor |
| K. Minimize Button | W. Workbook Control Menu
Icon | 8. Office Assistant |
| L. Maximize Button | | 9. Fill Button |

Formatting a Worksheet

Worksheets can be formatted much in the same manner as word processing documents.

Changing the Page Orientation or Paper Size

1. Click on **File** then select **Page Setup**.



Here you can change the Worksheet from Portrait to Landscape. You can also change the paper size.

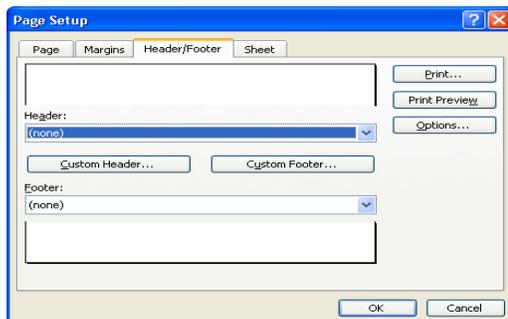
Adjusting Margins

You can adjust the top, bottom, left or right margins on a worksheet. You can also center the worksheet data horizontally or vertically.

1. Click on the **Margin tab** under **Page Setup**.
2. For the margin you want to adjust, type in the size.

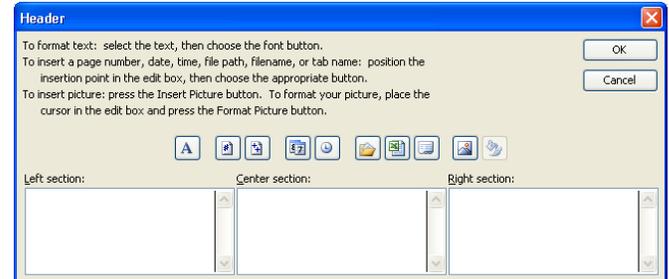
Inserting Headers and Footers

1. Click on the **Header/Footer tab** under **Page Setup**. The window below will display.



2. Click the Custom Header or Custom Footer button.

3. In the window that displays you can type the text for the Header or Footer you want to add. For Headers you can give a **HEADING OR TITLE** to the worksheet s it will appear on every paper.



4. The Header/Footer window is segmented in **LEFT**, **CENTER** and **RIGHT** sections. If you want the header or footer to appear to the left, type in the left section. For center or right header/footers type in those sections.

You can format header/footer text, insert a page number, date or time in any of the section boxes using the buttons shown below.



5. Click **OK**, when you are done typing and formatting the header/footer text.
6. Click **Print Preview** to preview the header/footer. To exit Print Preview click **Close**.
7. Click **OK** when done with Headers/Footers.

Inserting/Deleting Rows and Columns

Adding Columns

To insert a single column:

1. Select a cell in the column to the right of where you want to insert the new column. For example, select a cell in column "B" if you want to add a column to the left of column B.
2. Select **Insert** from the menu and choose **Columns**.

NOTE: The existing cells, including any data they contain, will move right to accommodate the new columns. Excel will automatically update any formulas so they will work with the new cell addresses.

To insert multiple columns:

You can insert more than one column at a time by selecting the column headers from more than one column and choosing **Columns** from the **Insert** menu.

1. Click the Column B header and drag your cursor across Columns C and D.
2. Select **Insert** then **Columns** to insert three columns to the left of B.

Adding Rows

To insert a single row:

1. Select a cell in the row immediately below where you want to insert the new row. For example, if you want to insert a row between rows 3 and 4, select a cell in row 4.
2. Select **Insert** from the menu and choose **Rows**.

NOTE: Existing cells, including any data they contain, will move down to accommodate the new rows. Excel will automatically update any formulas so they will work with the new cell addresses.

To insert multiple columns:

You can insert more than one row at a time by selecting multiple row headers before selecting **Rows** from the **Insert** menu.

1. Click the Row 2 column header and drag your cursor down Row headers 3 and 4.
2. Select **Insert** then **Rows** to insert three rows above Row 2.

Deleting Columns or Rows

1. Click on the column header to select the entire column or click on the row header to select the entire row.
2. Select **Delete** from the **Edit** menu.

NOTE: All data contained in the Column or Row cells will be lost.

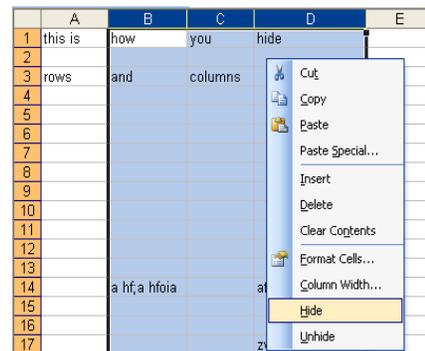
Hiding and UnHiding Columns and Rows

You can hide columns or rows to safeguard data that you may not want to be displayed. Hidden columns and rows will not appear in a worksheet and will not print. The data however will be calculated if the hidden columns or rows are part of a calculation in the worksheet.

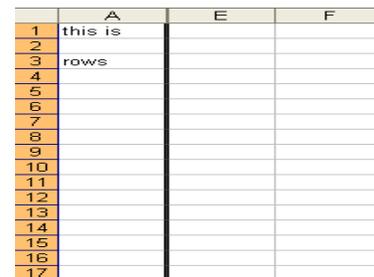
Hiding Columns or Rows

1. Highlight the columns and/or rows to hide. The column and/or rows should be shaded to indicate that they are selected.
2. Right click in any of the selected rows or columns to display the drop down menu.

Columns B thru D and Rows 1-17 below are highlighted to be hidden.

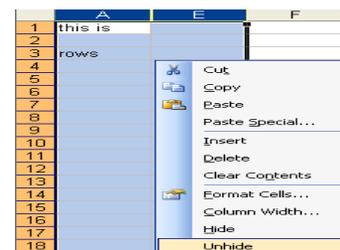


3. Click Hide and the selected columns and rows will be hidden.



UnHiding Columns or Rows

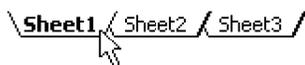
1. Highlight a column or row on each side of the hidden columns or rows so that all the hidden columns or rows are in the selected range. (Columns B-D are hidden so Columns A and E are highlighted).



2. Right click in any of the selected rows or columns to display the drop down menu.
3. Click **Unhide** and the selected columns and rows will be unhidden.

Naming Worksheets

Like a book contains pages, each workbook may contain several worksheets. Clicking once on the tab label will display that worksheet.



You can change the name of the worksheet to something more descriptive for your project. For example, you can name your worksheet “Midterm Grades” instead of “Sheet 1.”

1. Double-click on a **Sheet Tab** and hit the **Delete** key.
2. Type the new name for the sheet and hit the **Enter** key.

Adding/Deleting/Moving Worksheets

To add worksheets to a workbook

1. Click on the **Worksheet tab** to the left of where you want to add a new worksheet.
2. Select **Insert** from the top menu bar then click on **Worksheet**.

To delete worksheets from a workbook

1. Right Click on the **Worksheet tab** that you want to delete.
2. Select **Delete** from the pop-up menu.

To move worksheets in a workbook

1. Click on the **Worksheet tab** that you want move.
2. Holding down the left mouse button drag the worksheet to the position you would like to move it.
3. Release the left mouse button to drop the sheet into place.

Working with Data

Inserting Data into Cells

There are three categories of data that you can insert into a cell: numbers, formulas, and text. Below are some basic data entry tips:

- Typing data into a cell will delete any existing data in that cell. If you want to edit a cell without erasing its contents, **select the cell and press F2**. Use the left and right arrows on the keyboard to place the cursor in the cell you want to make the change.
- To correct a mistake while typing, using the **Backspace key** will erase the characters to the left of the cursor.
- To correct a mistake while typing, using the **Delete key** will erase the characters to the right of the cursor.

***Note:** If you accidentally delete a character or string of characters, you may reverse your most recent action by using the Undo function. Click the Undo icon, press **Control+Z** or select **Undo** from the **Edit** menu.*

Moving Data Using Cut and Paste

To move a cell(s), you can cut it from one location and paste it to another.

1. Highlight the cell(s) containing the data that you want to move.
2. Select **Cut** from the **Edit** menu or click the **Cut** button. The selected data is placed on the Windows clipboard and deleted from its original location.
3. Place the cursor in the cell where you want the cut data to be located.
4. Select **Paste** from the **Edit** menu or click the **Paste** button.

Copying Data Using Copy and Paste

1. Highlight the cell(s) containing the data that you want to copy.
2. Select **Copy** from the **Edit** menu or click the **Copy** button. The selected data is placed on the Windows clipboard and remains in its original location.
3. Place the cursor in the cell where you want the copied data to be located.
4. Select **Paste** from the **Edit** menu or click the **Paste** icon.

***NOTE:** Copy and Cut both place information onto the clipboard. The main difference between the two is that Cut deletes the original data while Copy leaves the original data unchanged.*

You can move text between documents by using Cut or Copy. Simply place the cursor within the new document before pasting in the information. The clipboard holds up to 24 images. You can paste an unlimited amount of times from the clipboard.

Formatting Data in a Worksheet

Changing Column Width

You can adjust the column width in several ways:

1. Highlight the column that needs to be adjusted, select **Format** then **Column:**
 - a. Select **Width** and type the desired column width to set a specific width **OR**
 - b. Select **AutoFit Selection** and Excel will determine the required column width.
2. You can also place the mouse at the end of the cell that needs to be adjusted. The cursor will change to a black double arrow.
3. Press and hold down the left mouse button to drag the cell end line or double-click on the line between the column headers to automatically adjust to the width.

***NOTE:** If you type a number and the cell displays ##### instead of a number, the column is not wide enough to display the entire number. Adjust the column width and the number will display properly.*

Changing Row Height

You can adjust the row height in several ways:

1. Highlight the row that needs to be adjusted select **Format** then **Row:**
 - c. Select **Height** and type the desired row height to set a specific height **OR**
 - d. Select **AutoFit Selection** and Excel will determine the required row height.
4. You can also place the mouse at the end of the numbered row that needs to be adjusted. The cursor will change to a black double arrow.
5. Press and hold down the left mouse button to drag the row end line or double-click on the line between the rows to automatically adjust to the height.

Centering Text in a Cell

To center text as you type, select the desired cell and click on the **Center** button before you enter the data. Everything you type will then be centered.

To center existing text:

1. Select the cell containing the desired data.
2.  Click the **Center** button.

***NOTE:** You may need to expand the column width to view all of the text.*

To turn off centering, click either the left or right alignment buttons.

Centering Text across Columns

Sometimes it is desirable to put a single header over several columns of text.

To center text across columns:

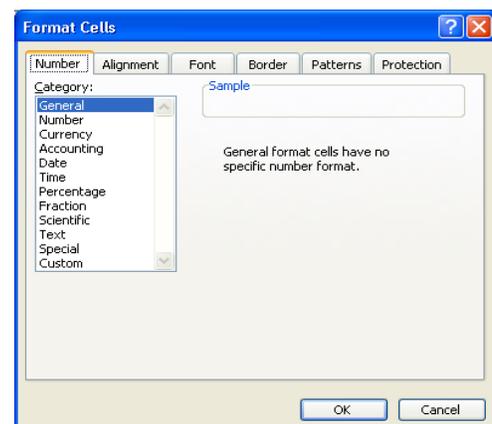
1. Select the row of cells where you want to enter the text.
2.  Click the **Center Text across Columns** button.
3. Enter the text.

To edit text after it has been entered, simply select the cell and press **F2**.

Formatting Numbers

You can format cells to change how numbers appear in a worksheet. You can add currency and percentage signs, commas, and specify a fixed number of decimal places. Formatting can be applied before or after you enter your data and can be applied to individual cells, rows, columns, ranges, or the entire worksheets. The default format for numbers and text is the **General** style.

Click on **Format** then **Cells** to see the formatting options



To format numbers:

1. Highlight the cells, rows or columns containing the numbers you wish to format, then click on **Format** then **Cells** and **Number** or another format type from the list. **OR**
2. Highlight the cells, rows or columns containing the numbers you wish to format.
3. Click one of the **Number Format** buttons shown below from the Excel toolbar.

Number Format Buttons

 Currency Style to two decimal places (\$1,200.00)

 Percent Style (120000%)

 Comma Style (1,200)

 Increases Decimal (click to add decimal places)

 Decreases Decimal (click to remove decimal places)

Fonts and Font Color

To Adjust Fonts:

1. Highlight the desired cell(s) and click on **Format** then **Cells** and **adjust Font Type, Style and Size**. **OR**
2. Highlight the desired cell(s) and click the **Font Type** or **Font Size** for the drop down menu.
3. Select the desired **Font Type** or **Font Size** from the drop down menu.

To Adjust Font Color:

 Highlight the desired cell(s) and click the **Font Color** button to change the font color to the color currently displayed. This does not affect the background color of the cell. To change to a different color, highlight the desired cell(s) click **the down arrow** on the **Font Color** button and select the desired color.

Bold, Underline, and Italics

 Select the desired cell(s) and Click the **Bold** button or press **Control+B** to turn **Bold** printing on and off.

 Select the desired cell(s) and Click the **Italic** button or press **Control+I** to turn *Italic* printing on and off.

 Select the desired cell(s) and Click the **Underline** button or press **Control+U** to turn Underline printing on and off.

Formatting Borders and Fill

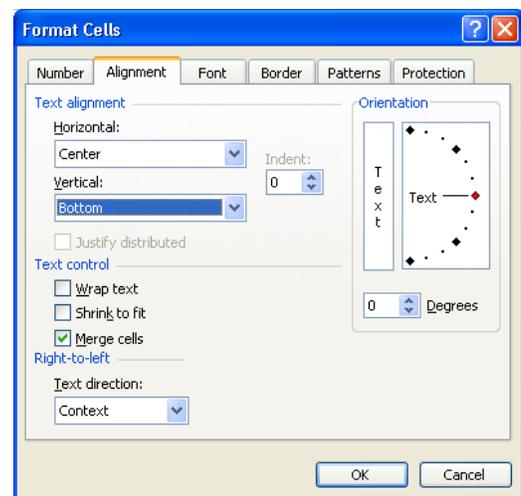
 Select the desired cell(s) and Click the down arrow on **Border** button. Choose the type of border(s). You can also click on **Format** then **Cells** and select **Borders** to change border formats.

 Select the desired cell(s) and Click down arrow on the **Fill Color** button, select the desired color to change the background color of the cell. This does not affect the color of the font. You can also click on **Format** then **Cells** and select **Pattern** to change fill colors.

Aligning Data

In addition to centering data in a cell, you can set the position of text and numbers to the top, bottom, left or right of a cell either horizontally or vertically.

1. Highlight the desired cell(s) and Click on **Format** then **Cells and Alignment**



In the Alignment Window, you can adjust:

1. **Alignment** – For Horizontal or Vertical adjustments, click **the down arrow** for the drop down menu and select the desired alignment. Click **OK** when done.

2. **Orientation – Insert** a number in the Degrees box to rotate the orientation of the data in the worksheet. Click **OK** when done.
3. **Text Wrap** – If data is too long for a cell and you do not want to increase the size of the column, you can use text wrap.
 - a. Highlight the desired cell(s) for the text wrap.
 - b. Click on **Format** then **Cells and Alignment**
 - c. Click in the check box next to **Wrap Text**.
 - d. Click **OK** when done.

Sorting Data

Data can be sorted in ascending order (lowest to highest) or in descending order (highest to lowest).

Key Facts about Sorting:

Ascending:

1. Numbers are sorted from the smallest negative number to the largest positive number.
2. Columns with mixed text and numbers – numbers are sorted first then letters.
3. Blank cells are sorted last.

Descending:

1. Numbers are sorted from the largest positive number, to the smallest negative number
2. Columns with mixed text and numbers – letters are sorted first then numbers.
3. Blank cells are sorted last.

To Sort Data:

1. Select any cell in the column that you want to sort.
2. Click the Sort Ascending button  or the Sort Descending button  on the Excel tool bar.

Working with Formulas

In addition to numbers and text, you can insert formulas into cells. Formulas can be as simple as =2+2 to more complex calculations.

Formulas must begin with an equal sign (=). This signals that you are not entering in text or a number. Excel will not perform a calculation without an equal sign.

Calculations follow the standard mathematical order of operation rules: multiplication (*) and division (/) first, followed by addition (+) and subtraction (-), with operations in parenthesis always done first.

For example, the formula =2+3*4 equals **14**. This answer is derived by multiplying 3*4 then adding 2.

The calculation order can be changed by using parentheses.

So using the above example with parenthesis, the formula =(2+3)*4 equals **20**. This answer is derived by adding 2+3 (added together first since they are in the parenthesis) then multiplying by 4.

Some of the following examples build upon one another. Try to do them in sequence.

Example 1: A Simple Formula

1. Click in any cell to select it.
2. Type: =3+2
3. Press **Enter**.

The cell will display the answer “5.” This formula simply adds the number 3 to the number 2.

Example 2: A Simple Formula with Cell Addresses

In a new spreadsheet:

1. Select the cell **A1**.
2. Enter the number **3**.
3. Select the cell **A2**.
4. Enter the number **2**.
5. Select the cell **B2**.
6. Enter the formula: =A1+A2 in cell B2 and press **Enter**. Excel will display the answer “5.” This formula adds the contents of cell A1 to the contents of cell A2.

= | =A1+A2

	A	B
1	3	
2	2	5

NOTE: You can also use the mouse to help write formulas. In the next example, select the cells instead of typing in the cell addresses. For example:

1. In cell **B3**, type an = sign.
2. Using the mouse, select cell **A1**. Notice how the cell address appears in cell **B3** with the blinking cursor.
3. Type a plus (+) sign.
4. Using the mouse, select cell **A2**. Notice how the cell address appears in the formula in cell **B3**.
5. Press the **Enter** key. The formula and result should be the same as cell **B2**.

Example 3: Working with Cell Addresses

Using the formula created in Example 2, we are going to change the contents of cells **A1** and **A2**. Watch how cell **B2** reflects the change.

1. Select cell **A1**.
2. Enter the number **7**.
3. Select cell **A2**.
4. Enter the number **3**.

Cell **B2** will now display the number “10.” By basing the formulas on cell contents instead of actual numbers (as in **Example 1**), we can easily manipulate the total without changing the formula.

Example 4: Using Variables

On a new spreadsheet, let's set up a typical personal budget.

1. In cells **A1** through **A5**, enter in the words: **Rent, Car Payment, Utilities, Credit Card, and Savings**. In cells **B1** through **B5** enter in the amount for: **Rent-450, Car-200, Utilities-150, Credit Card-50, and Savings-100**.

NOTE: When entering numbers that will be displayed as

currency, use the **Currency format button** .

2. In cell **A7**, enter the word “**Total:**”

3. In cell **B7**, enter the formula =B1+B2+B3+B4+B5 or select cell **B7** and click the AutoSum button .

NOTE: The AutoSum feature writes a formula for you using the SUM function. SUM adds together all of the numbers or cell addresses in the parentheses. The illustration below shows how SUM adds together the group or range of numbers from **B1** through **B6** (B1:B6).

= | =SUM(B1:B6)

	A	B
1	Rent	\$450.00
2	Car	\$200.00
3	Utilities	\$150.00
4	Credit Card	\$50.00
5	Savings	\$100.00
6		
7	Total:	\$950.00

5. Press the **Enter** key. The budget will be totaled.
6. Let's change some of the numbers. Change credit card expense to \$100 and car payment to 250? Notice that the total changes.

Example 5: Subtraction

Using the budget designed in Example 4, let's subtract our hypothetical monthly salary from our expenses.

1. In cell **D1**, enter the words: **Monthly Salary**.
2. For the sake of this example, let's say your monthly salary is \$1000. Enter **1000** in cell **E1**. If the words **Monthly Salary** are cut off, widen the column to accommodate them.
3. Select cell **A8**. Enter the words **Money Remaining**. Again, widen the column if all of the letters do not fit.
4. Select cell **B8**.
5. Enter the formula =E1-B7. This formula takes the contents of cell **E1** and subtracts the contents of cell **B7**. This automatically generates the amount of money left to spend after expenses.

= | =E1-B7

	A	B	C	D	E
1	Rent	\$450.00		Monthly Salary	\$1,000.00
2	Car	\$200.00			
3	Utilities	\$150.00			
4	Credit Card	\$50.00			
5	Savings	\$100.00			
6					
7	Total:	\$950.00			
8	Money Remaining	\$50.00			

Example 6: Division

Using the budget designed in Example 4, divide the total expenses by the monthly salary.

1. In cell **A12**, type **=B7/E1**.
2. In cell **A12**, type **=SUM(B1:B5)/E1**.

The answer should be the same 0.95. The second formula is a more complex expression using a range of cell addresses.

Other Functions Used in Formulas:

=Average (This function calculates the average of a set of numbers)

=Count (This function counts the number of cells that contain numeric values)

=Max (This function finds the highest number in a range)

=Min (his function finds the lowest number in a range))

Checking Your Worksheets for Spelling Errors

Spell Check only reviews cells containing text.

1. Press **F7** or click the **Spelling** icon . Excel will scan your text. If it finds a word that is not in the dictionary, a Spelling dialog box appears.
2. In the Spelling dialog box, you may:
 - Edit the unknown word in the **Not in Dictionary:** field and click the **Change** button.
 - Use the mouse or the Tab and arrow keys to highlight one of the choices in the **Suggestions:** list. Click **Change** to replace this one instance of the word.
 - Click the **Ignore Once** button if you want to leave this instance of the edited word unaltered or click **Ignore All** to ignore every instance of the word.
3. Press **Alt+F4** or click **Cancel** from the control menu to return to your document before the spell check is completed. Otherwise, Excel notifies you when it has finished checking and returns you to the document.

Saving Your Worksheets

Saving Your Work

All of the worksheets are saved when the workbook that contains them is saved.

NOTE: *It is a good idea to **save your workbook every 15 minutes or so as you work**. This ensures that your work will not be lost if the power is interrupted.*

1. Select **Save** from the **File** menu or Click the **Save icon** 

If you haven't saved this file yet, the **Save File** dialog box appears. If you have saved this file before, choosing **Save** will write over the previous version by using the same name.

NOTE: *Selecting **File** from the menu and choosing **Save As...** always produces the **Save As** dialog box. This box allows changes to the file name, type, and location.*

2. Use the mouse or the Tab key to select the **File name:** field. A suggested filename, such as Book 1, will be entered.
3. Name your workbook using up to 255 letters and spaces. When naming your workbook do not use the following characters: + = []: " < > ? / \ |. You can, however, add a period and a one to three character "extension" to help identify the file.

For example, you could name your file "**Fajer Spring 2006 Property Grades.xls**." The ".xls" extension indicates that the file is an Excel Workbook and not another file type (such as a graphic). If you do not specify a three-letter extension, Excel will automatically attach an .xls extension onto the file name. Depending on your Windows settings, the .xls extension may not be visible, but it will be there.

Printing Your Worksheets

You can print individual worksheets, the entire workbook or specific cell ranges on a worksheet. By default the active/current worksheet will unless you specify otherwise.

To Print the Active/Current worksheet, click the **Print button** on the tool bar.

To Print a specific range of columns and rows

1. Highlight the range of columns and rows.
2. Select **File** and **Print**. The Print window below will appear



3. Select **Selection** under **Print What**.
4. To preview the selection before printing hit the Preview button. When done hit **Close**.
5. Click **OK**.

To Print a Workbook

1. Select **File** and **Print**.
2. Select **Entire workbook** under **Print What**.
3. Click **OK**.