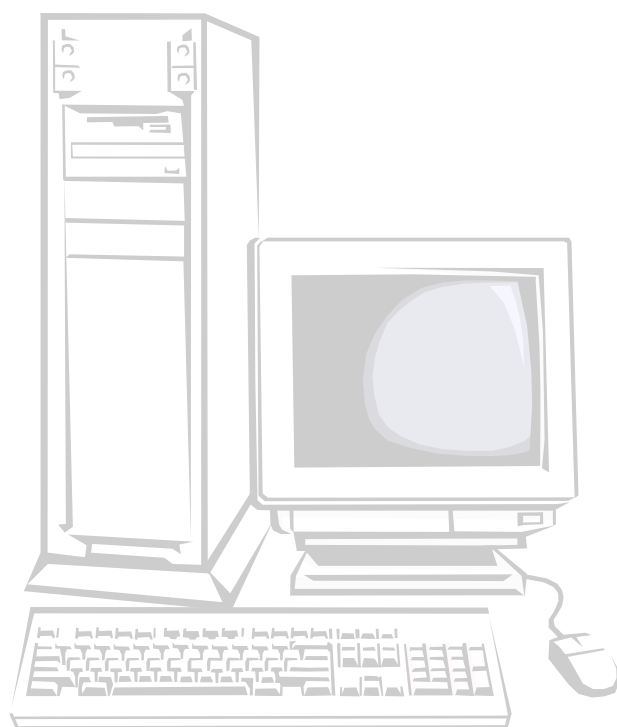


# Omaha Public Schools

## IMS/User Support



**Technology Training**  
**Microsoft® Excel™ - Level II**

# Review

## AutoSum

The *AutoSum* function automatically totals the value of selected cells in a row or column. *AutoSum* inserts a formula containing the SUM function and displays a moving border around the range of cells that it assumes you want to add. It then inserts the range into your formula.

## Merging and Centering Titles

To *merge and center* a title, click on the title you want format. Click and drag the mouse to select the range of cells into which you want to merge the title. Click on the *Merge and Center* button. To remove merging and centering, select the title to be changed, select **F**ormat on the main menu, and then select **C**ells. When the dialog box appears, choose the *Alignment* tab, and deselect **M**erge cells by clicking in the box. *Note: A title is simply descriptive text at the top of a worksheet or chart.*

## Alignment

By default, Excel 97 aligns text on the left side of a cell. However, for the most effective use of available space, it may be necessary to change the alignment of text entries or labels. To change text alignment, select the cell or range to be changed, then click the left-, center-, or right-alignment button on the formatting toolbar.

## Formatting Numbers

Number formatting determines how values will be displayed and takes effect only when a cell contains a number. By default, all cells in a worksheet use the General number format, with no zeroes to the right of the decimal point, all calculated decimal points shown, and all numbers right-aligned. Changing number formatting does not change the values used in calculations.

- For fast number formatting, use the toolbar buttons shown above.
- For customized or more specific number formats, select **F**ormat|**C**ells, and choose **C**ustom or one of the other available formatting options.

## Copying Formulas with Relative Cell References

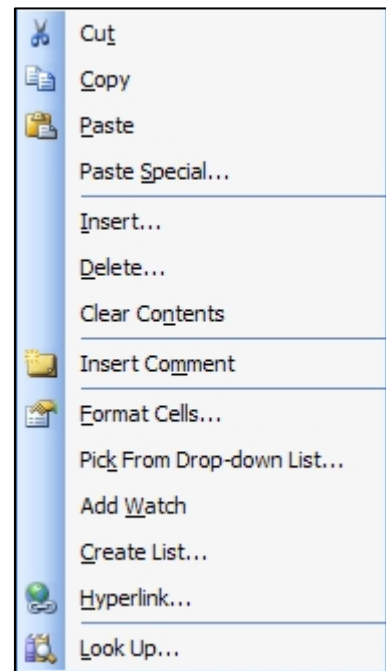
When you *move* a formula, its cell references do not change. When you *copy* a formula, relative cell references will change. To maintain the same cell references when you copy a formula to a different cell, use an *absolute cell reference*. For example, if your formula multiplies cell A5 with cell C1 (=A5\*C1), and you copy the formula to another cell, both references will change. To create an absolute reference to cell C1, for example, add dollar signs to the formula as follows: =A5\*\$C\$1

# Shortcut Menus

Excel includes *shortcut menus* that combine commands from various menus. The commands available from shortcut menus depend on the location of the mouse pointer. To access a shortcut menu, click the right mouse button with the pointer on a cell, column or row heading, or other worksheet or graphic element. All commands available through a shortcut menu are also available on the toolbars or the menu bar, but it is often more convenient to use the shortcut menus.

## ***Cut, Copy, and Paste***

Select a cell or range of cells to *cut* or *copy and paste*. Right-click the mouse to open the shortcut menu and select **Cut** or **Copy**. Move the mouse pointer to the cell location where you want to paste the selected cell or range of cells. Right-click the mouse to open the shortcut menu, and select **Paste**. If you **Cut** the original cell or range, it will disappear from its original location and appear in the new location. If you **Copy** the cell or range, it will remain in its original location and appear in the new location.



## ***Paste Special***

Select a cell or range of cells to cut or copy and paste. Right-click the mouse to open the shortcut menu and select **Cut** or **Copy**. Move the mouse pointer to the cell location where you want to paste the selected cell or range of cells. Right-click the mouse to open the shortcut menu, and select **Paste Special**. Select the desired paste options, and click **OK**.

## ***Insert***

You can insert blank cells, rows, and columns and fill them with data. If you're moving and copying cells, you can insert them between existing cells to avoid pasting over data.

### **Insert Rows**

1. To insert a single row, move the cursor to the row header *below* the new row's location.
2. Right-click the mouse to open the shortcut menu, and select **Insert**.
3. To insert *multiple* rows, select the rows immediately *below* where you want the new rows. Select the same number of rows that you want to insert.
4. Right-click the mouse to open the shortcut menu, and select **Insert**.

## **Insert Columns**

1. To insert a column, move the cursor to the column header on the *right* of the new row's location.
2. Right-click the mouse to open the shortcut menu, and select **I**nsert.
3. To insert *multiple* columns, select the columns immediately to the *left of* where you want the new columns. Select the same number of columns that you want to insert.
4. Right-click the mouse to open the shortcut menu, and select **I**nsert.

## **Clear Or Delete Cells, Rows, Or Columns**

When you *delete* cells, Excel removes them from the worksheet and shifts the surrounding cells to fill the space. When you *clear* cells, you remove the cell contents (formulas and data), formats, or comments, but the blank cells remain on the worksheet.

### **Clear Contents**

1. Select the cells, rows, or columns you want to clear.
2. Right-click the mouse to open the shortcut menu, and select **C**lear **C**ontents.

*Note: If you click a cell and then press DELETE or BACKSPACE, Excel removes the cell contents but does not remove any comments or cell formats. If you clear a cell, Microsoft Excel removes the contents, formats, comments, or all three from a cell.*

### **Insert Comment**

1. Click the cell in which you want to add the comment.
2. Right-click the mouse to open the shortcut menu, and select **I**nsert **C**omment.
3. Type the comment text in the box.
4. When you finish typing the text, click outside the comment box.

*Note: When you sort items, the comments move to new positions with the sorted items.*

### **Format Cells**

Cell formatting options (for both numbers and text) are available through the shortcut menu.

1. Select the cell or range to be formatted.
2. Right-click the mouse to open the shortcut menu, and select **F**ormat **C**ells.
3. Select the tab for the desired formatting option.

## Protect/Hide Worksheet Data

In some situations, you may want users to have the ability to change some cells but not others. For example, you may want users to be able to enter values but not change formulas. To protect, or lock, selected cells:

1. Select any cells to remain unlocked.
2. Select **Format > Cells**, and then select the **Protection** tab.
3. The upper box should contain a check mark, and the lower box should be blank.
4. Click **OK**.

### ***Protect Worksheets***

You can *protect*, or *lock*, a worksheet to prevent others from changing it. You can also assign a *password* so that only you can change the protection. [To assign a password to an entire file to prevent others from opening it, select **Save As**, and **Options**]. To protect a worksheet:

1. Activate the worksheet, and select **Tools** and **Protection**.
2. Select **Protect Sheet**, or **Protect Workbook**.
3. Type a password in the password text box, if desired.
4. Click on the check boxes to protect **Contents**, **Objects**, or **Scenarios**, and click **OK**.
5. If you entered a password, re-type the password in order to verify it, and click **OK**.
6. Click on **File**, and **Save** to re-save the file with its password.

### ***Hide Rows and Columns***

You can *hide* cells, ranges of cells, rows, or columns. However, you cannot hide data from someone familiar with Excel *unless* you lock the file with a password. Also, you must *unprotect* a worksheet before you can hide a column or row.

1. Select a cell in a column or row.
2. Select **Format** and **Row**, or **Format** and **Column**.
3. Select **Hide** (or **Unhide** to reverse it). Click **OK**.

The cell will now appear to be empty. To re-display the cell contents, select **Format** and **Row** or **Column**, and then **Unhide**.

## Hide Formulas

You can also *hide formulas* in Excel without affecting calculations. The calculated result is still displayed in the worksheet, but the Formula Bar will no longer display the formula. In order to hide formulas, a worksheet must be *protected*, or *locked*.

1. Select the formulas to be hidden.
2. Select **Format** and **Cells**, or open the shortcut menu with the right mouse button.
3. Select **Protection**, and click in the box labeled **Hidden**, and click **OK**.
4. Select **Tools > Protection > Protect sheet**.
5. To edit the formulas, select **Tools > Protection > Unprotect sheet**.

### MICROSOFT EXCEL - LEVEL II LAB EXERCISE #1

#### Part One

1. Create a worksheet by entering the following labels and values:

	A	B	C	D	E	F
1	RAIL OFFICE SUPPLY					
2						
3						YEAR
4	SALESPERSON		QTR 1	QTR 2	QTR 3	TOTAL
5						
6	Smith		1850	2775	2550	
7	Hotovy		4150	3995	4225	
8	Riley		1225	1500	1655	
9	Burns		3253	3500	3225	
10	Leslie		1250	1350	1350	
11						
12	TOTAL SALES					

2. Save the worksheet as **ROS.xls**

## Part Two

1. Calculate the YEAR TOTAL using the **AutoSum** function.
2. Copy the formula used in the YEAR TOTAL into the remaining YEAR TOTAL columns.
3. Calculate the TOTAL SALES for QTR1 using the AutoSum function.
4. Copy the formula used in TOTAL SALES for QTR1 into the QTR2 and QTR3 columns.
5. Merge and center the title RAIL OFFICE SUPPLY.
6. Right-justify the column headings QTR1, QTR2, QTR3, and YEAR TOTAL.
7. Format the spreadsheets to the currency format with no decimal places.
8. Re-save the document using the same filename.

## Part Three

1. Insert a new column between the **QTR3** and **YEAR TOTAL** columns.
2. The heading for the new column will be: **EST.**  
**QTR 4**
3. Insert a new row above *Leslie*, and type in the following data:

<b>10</b>	Walker		\$890	\$1,245	\$1,590	
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4. Re-save your worksheet using the same filename.
5. In cell **F6**, create a formula to multiply the contents of cell **E6** by 1.1, resulting in a 10% increase.
6. Copy the formula to the other salespersons.
7. Enter the appropriate formulas for cells **G9** and **F13**.
8. Re-save the worksheet using the same file name.

**MICROSOFT EXCEL 97 - LEVEL II  
LAB EXERCISE #2**

	A	B	C	D	E	F	G
1	RAIL OFFICE SUPPLY						
2							
3						EST.	YEAR
4	SALESPERSON		QTR 1	QTR 2	QTR 3	QTR 4	TOTAL
5							
6	Smith		\$1,850	\$2,775	\$2,550	\$2,805	\$9,980
7	Hotovy		\$4,150	\$3,995	\$4,225	\$4,648	\$17,018
8	Riley		\$1,225	\$1,500	\$1,655	\$1,821	\$6,201
9	Burns		\$3,253	\$3,500	\$3,225	\$3,548	\$13,526
10	Walker		\$890	\$1,245	\$1,590	\$1,749	\$5,474
11	Leslie		\$1,250	\$1,350	\$1,350	\$1,485	\$5,435
12							
13	TOTAL SALES		\$12,618	\$14,365	\$14,595	\$16,055	\$57,633

1. **Hide** the column EST QTR 4:

- Click anywhere in the EST QTR 4 column.
- Select **Format > Column**.
- Select **Hide**.
- Click **OK**.

2. **Protect** your formulas:

- Select the range of cells that you want *unlocked* (C6..E11).
- Select **Format > Cells**.
- Select the **Protection** tab, and clear the "Locked" check box.
- Click **OK**.
- Select **Tools > Protection > Protect Sheet**, and then click **OK**.

# Graphs and Charts

## *Using Chart Wizard*

The easiest way to create a chart in Excel is to use the **Chart Wizard**. If the worksheet is set up properly, creating a chart is a straightforward process.

1. Select the range of cells to be charted, including titles, labels, and numeric data.
2. Click on the **Chart Wizard** button on the **Standard Toolbar** (the icon is a small column chart).
3. The **Chart Wizard** will open, and the Office Assistant may pop up to provide help creating your chart (you can close the Office Assistant, if desired).
4. **Step 1** of the **Chart Wizard** requires you to select the type of chart you wish to create. You can select one of the standard charts or specify a custom chart.
5. **Step 2** allows you to select whether the x-axis uses your worksheet's rows or columns for its labels. You can also add or remove series labels or select category (X) axis labels.
6. **Step 3** includes adding a chart title, a category X axis and a value Y axis, as well as allowing other adjustments.
7. **Step 4** allows you to place the chart on a new worksheet or within the current worksheet as an object.
8. Click **Finish**, and the new chart will be placed where you specified.