



Excel Basics



Contents

Upon completion of this class, you should be able to:

- ? Recognize a spreadsheet
- ? List some common uses for spreadsheets
- ? Identify the parts of the Microsoft® Excel window
- ? Create an Excel workbook
- ? Enter data into Excel
- ? Edit cell data
- ? Save an Excel workbook
- ? Open an Excel workbook
- ? Select cells
- ? Use the AutoSum function
- ? Format cells using text formatting and simple number formatting
- ? Cut, copy and paste

Additional Resources:

The library has many books on Microsoft® Excel and other spreadsheet software. Look in call numbers **005.369** and **650.0285** for books about spreadsheets.

Most libraries will also have this handy book in the reference section (R005.369) for you to use while in the library:

Teach Yourself Microsoft Excel 97 Visually (or *Excel 2002 Simplified*)
by Ruth Maran

For other technology workshops & programs being offered at the library check: <http://www.plcmc.org/programs>



Spreadsheets

Spreadsheet software

- Microsoft® Excel
- Lotus 1-2-3
- Quattro® Pro

Who uses spreadsheets

- Businesses
- Scientists
- Accountants

What Excel can be used for

- Listing addresses and phone numbers
- Managing checkbook register
- Tracking home budgets
- Tracking weather trends
- Listing books to read or that you have already read

An electronic spreadsheet is the modern equivalent of three familiar bookkeeping tools: the paper ledger, pencil and calculator.

If you have ever done bookkeeping the non-electronic way, you may be familiar with some of the challenges: filling out and making corrections on the ledger sheet; calculating totals, averages, maximums and minimums; recalculating these values if one numeric entry changes; redesigning the ledger to add or delete columns or rows; and preparing the ledger for presentation.

Electronic spreadsheets, such as Excel, eliminate or reduce the difficulty of such tasks.



The Excel window

Windows

- When you close the inner window, you are closing the file or workbook.
- When you close the outermost window, you are closing Excel.

A single worksheet contains

- 256 columns
- 65,536 rows
- Over 16 million cells
- Each cell can contain up to 255 characters

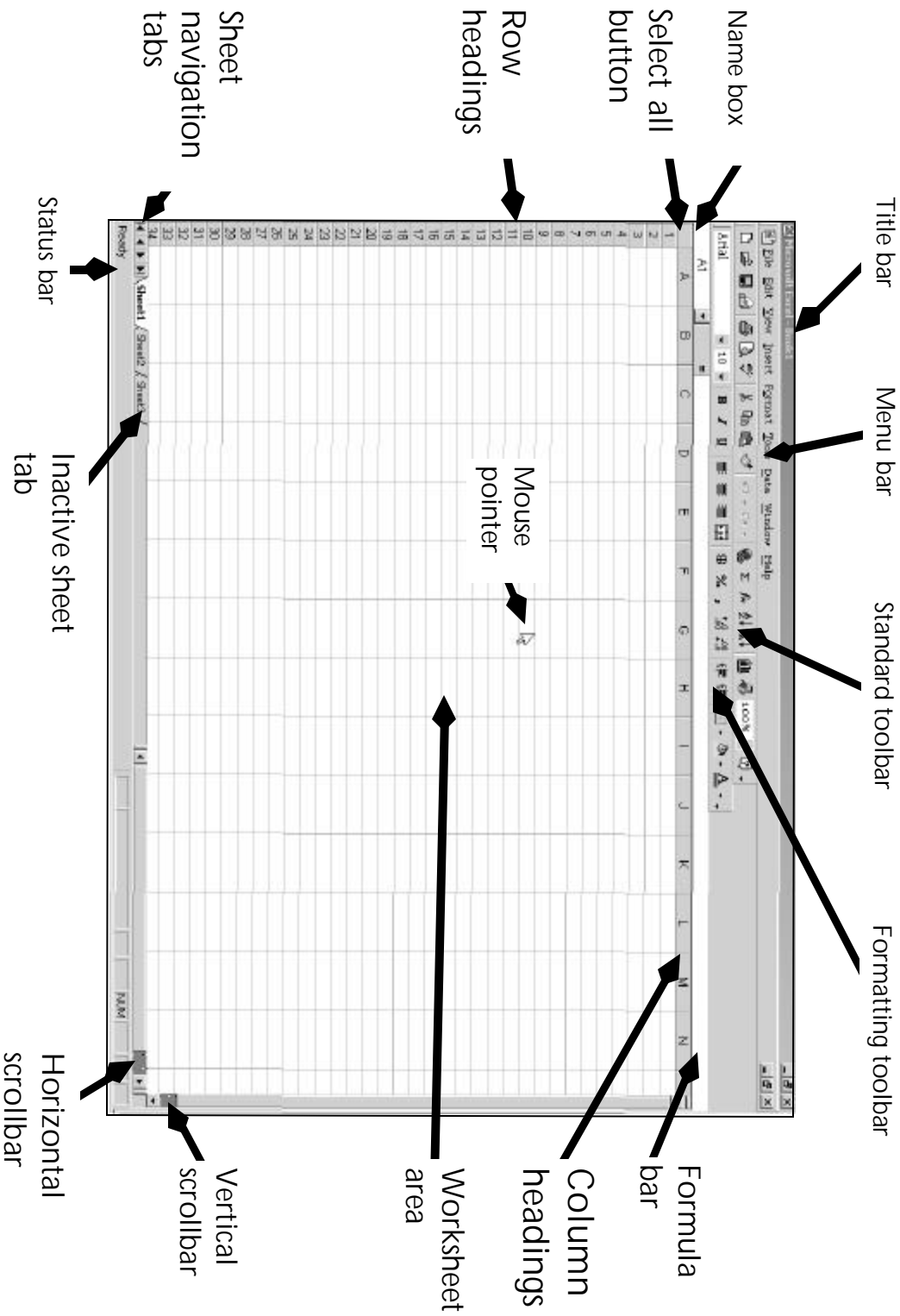
A window is a rectangular area on the screen through which you view a computer program or application. After starting Excel, you see two windows, one within the other. The outer window is called the application window, and the inner window is called the document window.

When you open Excel, Excel creates a single new file named "Book1." This file, also called a workbook, contains three worksheets named "Sheet1," "Sheet2" and "Sheet3." To move from worksheet to worksheet, click on the worksheet tabs or use the arrows to the left of the tabs.

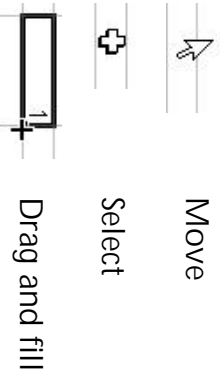
An Excel worksheet is an electronic version of a paper spreadsheet, containing horizontal rows and vertical columns. Letters running across the top of the worksheet designate columns, and numbers running down the left side of the worksheet designate rows.

The intersection of a column and a row is called a cell. Data is entered directly into any cell that is active. A thick, dark border identifies the active cell.

The Excel Window



Mouse pointer shapes:





Opening your workbook

File extensions

- A file extension tells Windows what program to use to open a file.
- Excel uses .xls as its file extension.
- Each computer program has its own file extension

1. Click on the Open button on the standard toolbar or use the menu command File, Open.



2. The second step is to tell the computer where the file is located. Tell the computer to look in the floppy disk (3½ Floppy A:) location. To do so, click on the drop down arrow and select 3½ Floppy A:
3. Select the file that you would like to open by clicking on the file name with the mouse. Hint: If there are no files listed make sure that the files of as type selected is Microsoft Excel Files.
4. The last step is to click the Open button.



Exercise 1: Navigation

Help!

- Microsoft® Excel has extensive help files built in to assist you with using the product.
- Just click on the **Help** menu and select **Contents and Index**.
- You can also press **F1** on the keyboard to bring up Help.

1. Launch Microsoft Excel by clicking the **Start** button with your mouse. Then select **Programs, MS Office, Microsoft Excel**. (Look for the green icon.)
2. Open the workbook entitled “Example” using the **file** menu, **open** command.
3. Look at page four of this handout and try to find as many of the Excel window components as you can.
4. Explore the functions of the buttons on the toolbars by viewing the ToolTips. Position the mouse cursor over a button, but **don’t click**. Wait two to three seconds. A yellow box will appear that describes the function of the button.
5. Use your scroll bars to move down to the end of the worksheet and then back to the beginning.
6. Use your mouse to move from cell to cell.
7. Use the arrow keys on your keyboard to move from cell to cell.
8. Return to cell A1 by pressing the **Ctrl** key and the **Home** key at the same time.
9. Click on the Budget tab and then on the pie chart tab to view other “sheets” in this workbook. Practice moving around these worksheets.
10. Close the file using the **File** menu, **Close** command. If asked, do not save the changes to the workbook.



Entering and editing data

“Golden Rule” of Excel

Creating a basic spreadsheet in Excel is a breeze. The principal rule to follow when creating spreadsheets is to focus on **getting the content of the data in first**, then go back and apply formatting. In other words, make sure your data is correct before you make it look pretty.

In Excel you can enter *values* (numbers) or *labels* (text) by typing directly into a selected cell. The default alignment is right for numbers and left for text. To tell Excel to accept the data, you must either press the **Enter** key, click on a cell other than the one into which you are entering data, or press one of the directional arrow keys on the keyboard.

Change cell contents by first selecting the cell to be edited, then make corrections in the formula bar. When you are finished making the correction, press the **Enter** key on your keyboard.



Note that you could simply select the cell and type in new data; however, when the cell contents are long and/or complex, it is a time saver to use the formula bar to make adjustments.


Tips

- Cells in a spreadsheet are given “addresses” instead of names. A cell’s address is its column letter followed by its row number. The first cell — the cell in the upper left corner — is given the “address” A1. The cell to its immediate right is B1. The cell below it is A2.
- When entering data for the first time or when editing data, you must move to another cell before the worksheet will show the changes.
- To move to a different cell, you can press the **Enter** or **Tab** keys on the keyboard or use the mouse to click on another cell. The tab key will move you to the next cell to the right. Holding the **shift** key while you press tab will move you to the next cell to the left.



Saving your workbook

3 ways to save

- Click the **Save** button on the standard toolbar. 
- Use the **File** menu and click on the **Save** button.
- Use the **Ctrl + s** keyboard shortcut.

Save As

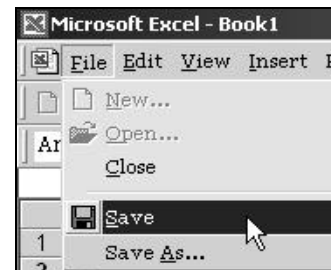
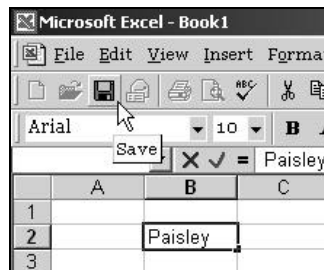
The **Save As** command can only be found on the File menu. The **Save As** command allows you to save your work to a different location or with a different file name. This can be useful if you want to save different versions of your file.

Save vs. Save As

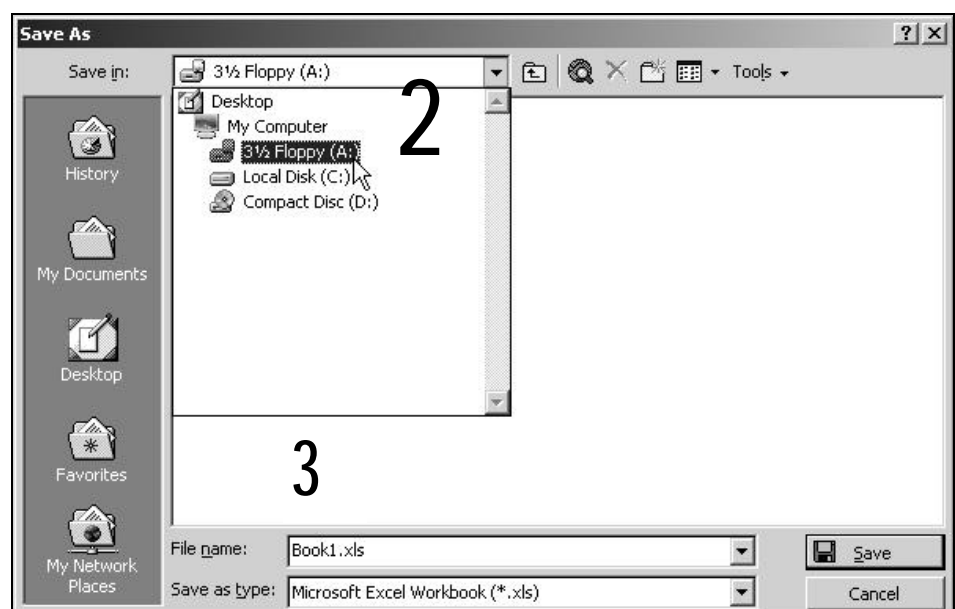
Here's a tip to help you remember the difference between **Save** and **Save As**:

- **Save** = 1 word and 1 file
- **Save As** = 2 words and 2 (or more) files

1. Click the **Save** button on the standard toolbar or use the menu command **File, Save**.



2. The second step is to tell the computer where you would like to save the file. By default, at the library, the computer will save to the C:\temp location. You need to tell the computer that you want to save to the floppy disk (3 1/2 Floppy A:) To do so, click on the drop down arrow and select 3 1/2 Floppy A:
3. Type in a name for the file in the box for File name. Additionally, make sure that the save as type is Microsoft Excel Workbook.
4. The last step is to click the **Save** button.





Selecting cells and AutoSum

Tips for Selecting Cells

When you select a group of cells, the cells will appear highlighted in the opposite color of the background. If the background of your cells is white, the cells will appear as black.

The exception to this is the first cell that you selected. This cell will always remain its original color so that you can tell which cell was the cell that you began with. The black border that usually surrounds the active cell denotes the first cell that you selected.

AutoSum Tip

The AutoSum button is located on the standard toolbar and looks like a squiggly E. (It's actually the Greek symbol Sigma, or S.)



The AutoSum button is a quick way to add numbers. But first you must know how to select cells.

Selecting cells

Selecting cells involves clicking and dragging the mouse.

1. Put the mouse in the top left corner of the area that you want to select.
2. Click and hold down the left mouse button and drag the mouse to the lower right corner of the area that you would like to select. **Hint:** Read the notes in the left margin to understand how to tell what areas have been selected.

AutoSum

The easiest way to add a group of numbers in a table format is to select all of the values and all of the empty cells where you would like the totals to appear. Then click the AutoSum button located on the standard toolbar.

For example, selecting these cells:

	A	B	C	D	E
1	Candy Sales				
2					
3		Jan	Feb	March	Total
4	Snickers	125	100	150	
5	Plain M&Ms	100	200	125	
6	Peanut M&Ms	150	250	120	
7	Total				
8					

Then clicking AutoSum, gives this result:

	A	B	C	D	E
1	Candy Sales				
2					
3		Jan	Feb	March	Total
4	Snickers	125	100	150	375
5	Plain M&Ms	100	200	125	425
6	Peanut M&Ms	150	250	120	520
7	Total	375	550	395	1320
8					

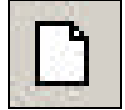


Exercise 2: Creating a simple worksheet

More saving tips

- One of the benefits of using an electronic spreadsheet program is that you can save your work and come back to it at a later time.
- When using any program, it is a good idea to save your work about every 10 minutes.
- Unexpected events like power outages or computer problems can cause your system to reboot or “lock up.” If this occurs, any work that you have done since your last save will be lost.
- At the library it is also important to save your work to a 3½ floppy diskette and not to the computer’s hard drive. Utilities have been installed on the computers that will delete all files from the hard drive whenever the computer reboots

1. Create a new workbook by clicking the New button on the standard toolbar.
2. In cell A1, enter the title of the worksheet, “Budget 1st Q.”
3. Enter the rest of the data as displayed in the example below.
4. Save the workbook by clicking the Save button on the standard toolbar. Name the file “My Budget.” Remember to save the file to your diskette (3½ Floppy A: Drive).
5. Use AutoSum to calculate the totals in E4, E5, E6, B7, C7 and D7. Save your work again.
6. Now close Excel. Then open Excel and open the workbook you just created.

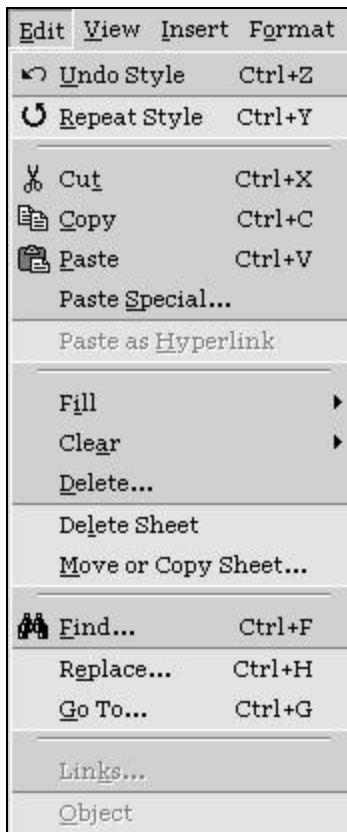


	A	B	C	D	E
1	Budget 1st Q				
2					
3		Jan	Feb	March	Total
4	Rent	550	550	560	
5	Food	222	246	298	
6	Bills	450	500	550	
7	Total				



Editing your spreadsheet

In this lesson, we will focus on techniques you can use to modify your worksheets. Many of these commands come from the **Edit** menu.



As you work with spreadsheets, you will need to change data, delete and add it.

To change existing data, select the cell where you need to make changes. Then type your changes into the formula bar.

To delete data in a single cell, highlight it and press the Delete key on your keyboard.

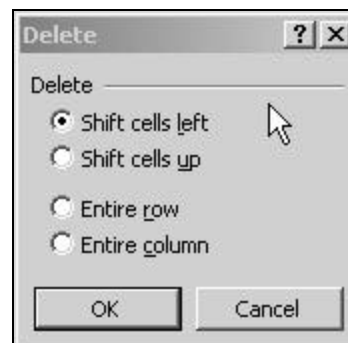
To delete data from an entire range, select the range and press the **Delete** key. (See page 13 for a definition of range.)

To add an entire row, select the row below where you want the new row to appear, and select the **Insert** menu, then **Rows**.

To add an entire column, select the column to the right of where you want the new column to appear, and select the **Insert** menu, then **Columns**.

To delete an entire row or column, select the row or column by clicking the row or column heading. (Refer to page 5 if you've forgotten where the headings are.) Then select **Edit, Delete**.

If you select a group of cells instead of the entire row or column, you will be asked what should be done with the rest of your data:





Formatting cells

What's a range?

Many of these techniques can be applied to a *range* of cells. In a spreadsheet, a range is any group of cells that touch each other. A range is always referenced this way — A3:E7 — where the first cell address is the top left cell and the second cell address is the bottom right cell.

Remember undo!

Don't forget that you can use the Undo button if you make a mistake! It magically undoes what you just did, and is a great way to save yourself if something you accidentally hit made all your data disappear.



Tip

You can quickly select an entire row by clicking the row number/row heading. Select an entire column by clicking the column letter/column heading.

Once you have entered data into a spreadsheet, you may want to make some visual changes to make the data more readable.

Select the cell or range of cells that contain the data you want to format, and click the appropriate formatting button on the toolbar. For example:

1. Select the cells in the range B3:E3

	A	B	C	D	E	
1	Candy Sales					
2						
3		Jan	Feb	March	Total	
4	Snickers	125	100	150	375	
5	Plain M&Ms	100	200	125	425	

2. Click the **Bold** formatting button, and then click somewhere on the screen but outside of highlighted cells.

	A	B	C	D	E	
1	Candy Sales					
2						
3		Jan	Feb	March	Total	
4	Snickers	125	100	150	375	
5	Plain M&Ms	100	200	125	425	

Notice that the data in B3:E3 is now in **bold**. Use the same method to apply any of the formatting in the toolbar.

To remove formatting from selected text, click the formatting button again.

Note: To apply font changes and other formatting to the text in an individual cell, first select the cell. Then highlight the text in the cell — either by double-clicking the cell or in the formula bar — and make your changes. Click Enter to see your changes on-screen.



Formatting cells

Pretty colors

You can also change font colors and fill colors using the formatting toolbar.

- To change font color, select the appropriate cells and click the Font Color button. Then select the color you need. **Note:** Fonts in color are usually easier to read if they are also in boldface.
- To change or create a fill color, select the cells you want to change. Then click the paint bucket tool and select the color you need.
- Another option is to use AutoFormat. Select your entire table, then Format, AutoFormat. You will see a variety of formats available; double-click the one you want to use.

Use the same steps to apply any of the formatting options on the toolbar. Most will be familiar, although there are a few that may be new to you.



Merge and Center or **Center Across Columns** will center the contents of a cell across multiple columns.

This is not the same as **Center Align**, which, with left align and right align, controls the position of text within a cell.



Currency format displays numbers as currency. For example, 1234 becomes \$1,234.00.



Percent format displays numbers as percentages. For example, 1234 becomes 123400%.



Comma format displays numbers with commas. For example, 1234 becomes 1,234.00.



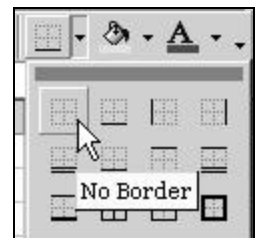
The increase decimal button and the decrease decimal button control how many decimal points appear after a number. Typing 1234 then clicking the increase decimal button twice results in 1234.00. Typing 1234 then clicking the decrease decimal button makes no changes, because there are no decimal places to remove.

Borders and gridlines

To apply borders or gridlines to cells, first select the cell or group of cells. Click on the arrow next to the **Borders** button on the **Formatting** toolbar. Last, select a border or gridline style.

If you select more than one cell and then apply the border, the border will be applied to the group of cells you selected — not to each individual cell.

To remove borders, select a range of cells and then select the no borders option.





Exercise 3: Modifying your spreadsheet

1. Open your budget spreadsheet.
2. Increase the font size of the title (**Budget 1st Q**) to 16 and make it bold.
3. Using the Merge and Center tool, center the title (**Budget 1st Q**) which is stored in cell A1 across the columns. (Select the range A1:E1, then click on the Merge and Center tool button.)
4. Make the headings in Row 3 and in Column A bold.
5. Center the headings in Row 3 and in Column A using the Align Tool.
6. Italicize the totals listed in Row 7 (B7:E7). Apply the currency format to the data in range B7:E7.
7. Add grid lines to the entire spreadsheet (Range A1:E7).
8. Save your changes.

	A	B	C	D	E	
1	Budget 1st Q					
2						
3		Jan	Feb	March	Total	
4	Rent	550	550	560	1660	
5	Food	222	246	298	766	
6	Bills	450	500	550	1500	
7	Total	\$ 1,222.00	\$ 1,296.00	\$ 1,408.00	\$ 3,926.00	
8						






Cut, copy & Paste

Keyboard

- Cut Ctrl + x
- Copy Ctrl + c
- Paste Ctrl + v

Toolbar buttons

- Cut 
- Copy 
- Paste 

Menu commands

Cut, copy, & paste can all be found in the **Edit** menu.

Tip

In Excel, a section of a worksheet that has been cut or copied will display with a dotted line border around it. When you paste the data into another part of your worksheet or workbook, the dotted line will disappear.

Cut, copy and paste are useful commands that can help you to edit and move data around. These commands are available in most programs including Word, Excel and PowerPoint.

The cut command will let you “cut” data or move the data to another location. (Think of scissors cutting a section out of a piece of paper). That “cut” data is stored in the computer’s short-term memory.

To move data using cut & paste

1. Select the data to be copied.
2. Click the **cut** button on the toolbar, **or** hold down the **Ctrl** key while you hit the **x** key on your keyboard.
3. Move your mouse to the data’s new position.
4. Click the **paste** button on the toolbar, **or** hold down the **Ctrl** key while you hit the **v** key on your keyboard.

The copy command is very similar to the cut command. However, instead of moving the data, you make a copy of it and place that copy in another location of your worksheet or workbook. This can be very useful when you need to duplicate a portion of your spreadsheet and don’t want to retype it.

To copy data

1. Select the data to be copied.
2. Click the **copy** button on the toolbar, or hold down the **Ctrl** key while you hit the **c** key on your keyboard.
3. Move your mouse to the data’s new position.
4. Click the paste button on the toolbar, or hold down the **Ctrl** key while you hit the **v** key on your keyboard.



Final project

1. Create a new workbook by clicking on the New button. In Cell A1 give the spreadsheet the title: "<your first name>'s Sales Report." Then fill in this data:

	Store A	Store B	Store C	All stores
CDs	775	600	995	
Videos	550	426	600	
DVDs	360	250	400	
Total				

2. Use AutoSum to get the totals for what each store sold and for the numbers of items sold at all stores. (Cells B7, C7, D7, E4, E5 and E6.)
3. Save your workbook and name the file: <your first and last name> Sales.
4. Insert two new rows between 4 and 5 and give them the headings Gizmos (Cell A5) and Gadgets (Cell A6).
5. Add this data in A5:D6

Gizmos	600	500	400
Gadgets	400	500	600

6. Select Row 5 (Gizmos) and delete it.
7. Use Undo to bring the row back.
8. Select cell A1, change the font size to 18 and make it bold. Select the range A1:E1 and center the heading using the Merge and Center tool.
9. Make Column A and Row 3 bold.
10. Select the range B4:E9 and give it \$ format and add gridlines. Remove any decimal places being shown.
11. Save your work.

Your final product should look like the example on the next page!



Final project — check your work!

	A	B	C	D	E	F
1	Amalie's sales report					
2						
3		Store A	Store B	Store C	All stores	
4	CDs	\$ 775	\$ 600	\$ 995	\$ 2,370	
5	Gizmos	\$ 600	\$ 500	\$ 400	\$ 1,500	
6	Gadgets	\$ 400	\$ 500	\$ 600	\$ 1,500	
7	Videos	\$ 550	\$ 426	\$ 600	\$ 1,576	
8	DVDs	\$ 360	\$ 250	\$ 400	\$ 1,010	
9	Total	\$ 2,685	\$ 2,276	\$ 2,995	\$ 7,956	
10						