INTRODUCTION TO MS EXCEL 2000

Creating an Excel 2000 Spreadsheet

Starting Excel 2000

In the following exercises you will **learn** some of the necessary steps to **create** a **spreadsheet** using **Microsoft Excel 2000**. You will learn not only how to type various items into the spreadsheet, but also how to copy columns, widen columns, fill columns, add, subtract, multiply, divide, and a variety of other things.

To begin, **load** the spreadsheet by **clicking twice** on the **Excel 2000 Windows Icon,** to do this click-on the **Start Button** in the **lower left corner** of the screen, move the cursor up to **Programs**, and then move to **Microsoft Excel** and click once on it using the left button on your mouse.

A **spreadsheet** is a "**number manipulator**." To make the manipulation of numbers easier **all spreadsheets** are organized into **rows** and **columns**. Your initial spreadsheet will look something like the following:
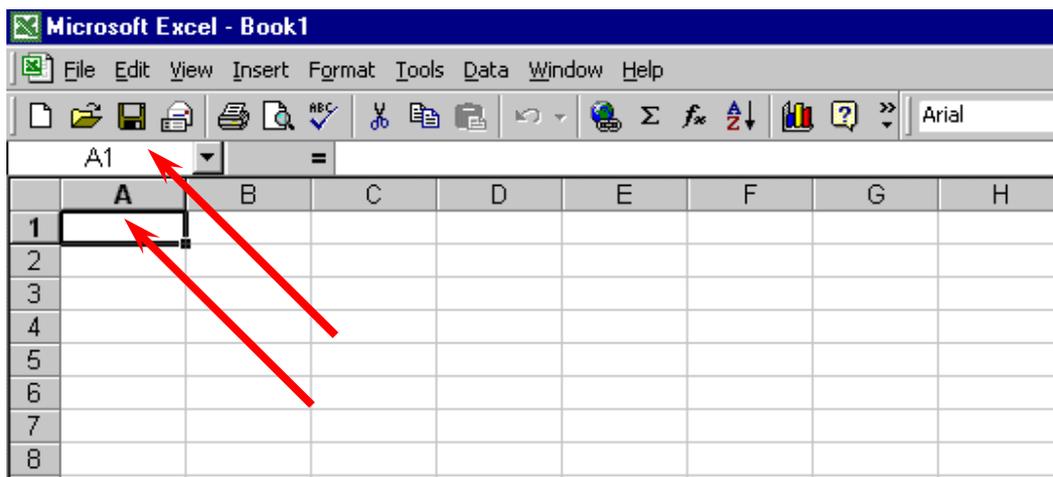
Notice that the "**main**" part of the spreadsheet is composed of **Rows (Labeled 1, 2, 3, 4**, etc.) and **Columns (Labeled A, B, C, D**, etc.).

The "**intersection**" of **each row** and **column** is called a **cell**. In the image above the **cursor is on** the "**home**" **cell** – **A1**. **Notice Row 1 and Column A are "bold."** This **indicates** what is called the "**address** of the **cell**. **Notice that right above cell A1**, another **A1** is **displayed** in a **small box** called the **Name Box**. Whenever you "click" on a cell the address of that cell will be shown in the Name Box.

In this course, whenever it is indicated that you need to **click** the mouse, it will mean to **click** the **left mouse button** – unless it is indicated that you should click the right mouse button.

Moving Around the Spreadsheet

You can move around the spreadsheet/cells by **clicking** your mouse **on** various **cells**, or by using the **up, down, right and left arrow movement keys on the keyboard**. Or, you can move up and down by using the "**elevator**" bars on the **right** and **bottom** of the spreadsheet.

Go ahead and **move around the spreadsheet**. **Hold down** the **down arrow key** on the **keyboard** for a few seconds – then **click**-on a **cell**.

**Notice** how the **Name Box** always **tells** you "**where you are**."

Now hold down the **right arrow key** on the keyboard for a few more seconds. **Notice** how the **alphabet changes** from **single letters (A, B, C,. …. Z)** to **several letter combinations (AA, AB, AC)**. There are **hundreds of columns** and **thousands of rows** in a spreadsheet.

**There are two ways** to **return** to the **Home Cell (A1):**

1. On your keyboard locate and **hold down the Ctrl key,** now find and press the **Home key at the same time.**

2. Simply **click-in** the **Name Box** and **type-in A1**. Then **tap** the **Enter key** and you will **go** to cell **A1**. You can go to any cell in the spreadsheet by this method. Simply type-in a row and column, tap the Enter key, and you'll go to that cell.

Now that you have the "feel" of how to move around the Excel spreadsheet, **go to** the **cells** as **indicated below** and **type-in** the following:

1. Go to cell: Cl

2. Type in (Your Name)'s Budget. It should **look similar** to **the image below**. **Do not tap Enter** when you finish typing.
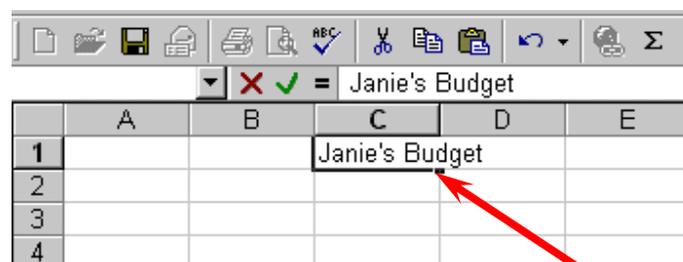
Look at cells **C1** and **D1**. Notice how your **entry has spilled over from cell C1** into cell **D1**. Sometimes this is a problem, and sometimes it is not. Now **move** to cell **D1** and **type-in** the word **Bonzo** and **press the Enter key.**
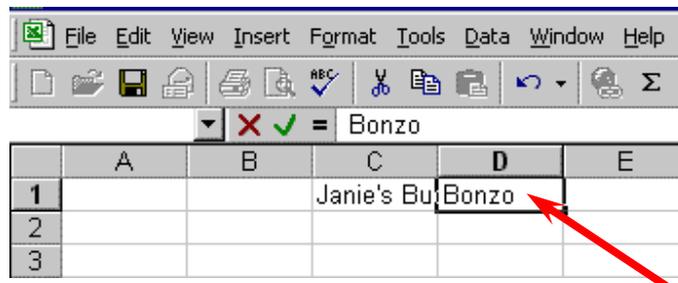
Notice how **Bonzo** now **covers** the **right part of your original entry**!! Now **move back** to cell **C1** and **click-on it**. Look at the upper part of the spreadsheet just above the cells where you typed. Your name and the word budget are still there. Bonzo only **covered** the **portion in cell D1**. **See the image and arrow below.**
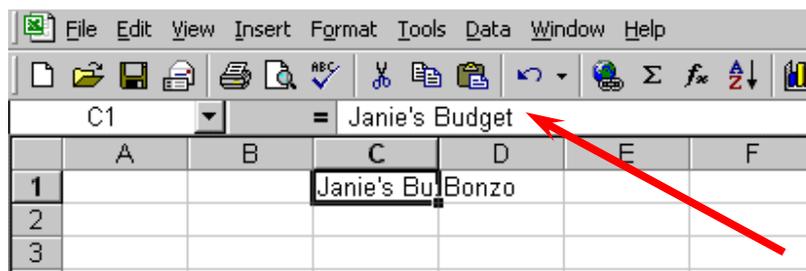
There are **several ways** to **take care** of this cell overlap problem. For the moment **move back** to cell **D1** and **click**-on cell **D1**. **Tap** the **Delete** key above the arrow movement keys on the **keyboard**. Notice that **Bonzo disappears** and your **entire entry reappears**. Deleting an entry is one way to expose the hidden entry in a cell, however deleting an entry is not always an option, and later in this course book we'll look at some other ways to solve this problem.

Now we'll continue making some entries. If you happen to **make a mistake** simply **retype the entries**. Any time you want to replace something in a cell you can simply retype a new entry and it will replace the old one. Later on we'll look at ways of how to edit typing mistakes.

Move to the **following cells** and **type-in** the **information indicated**. Press the enter key after each entry.

<u>Cell</u>	<u>Type-in</u>
A3	**Income**
B4	**Parents**
B5	**Job**
B6	**Investments**
B7	**Total**
A10	**Expenses**
B11	**Food**
B12	**Beverages**
B13	**Parties**
B14	**Miscellaneous**
B15	**Total**

Your spreadsheet should now look like the picture on the right.

At this point you probably have noticed, the words "Investments" and "Miscellaneous" have spilled over the space given in their cells. Do not be concerned at this point. We'll soon fix this problem.

Now, type the following numbers into the indicated cells:

C4	**300**
C5	**50**
C6	**150**

Your spreadsheet should look like the one on the right. Now we want to place an underline at the bottom of the three figures so that we can indicate a total below – in cell C7.

Point to cell **C7** with the mouse (That's where we want the line -- **always move the cursor to the place where you want to insert a line**.). With the cursor on cell **C7** tap the *right* **mouse button**.

A sub-menu with a caption **Format Cells appears**.

The **right click** will "**always bring up**" a **menu** that is "**specific**" to the "**place**" where you click. This will work in any Microsoft Windows product.

You can always tell "where" you click the right mouse button for the cursor arrow will always be in the upper left corner of the menu that appears.

Using your left mouse button select **Format Cells** from the list**.**
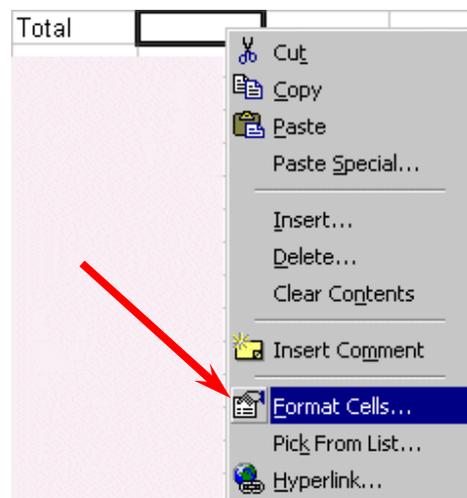
When the screen below appears, click on the **Border** tab.

Look at the **Line Style** box in the **lower right**. There are several types of lines that you can choose from.

Point to the **thick single line** in the **Styles Area (see arrow)** and **click** the **left** mouse button. A **box** will **go around the line**.

Look at the area which says **Border.** Point to the **upper part of the Text line box (see arrow)** and **click** the **left** mouse button. A **thick black line will appear** at the **top** of the **Text** box.
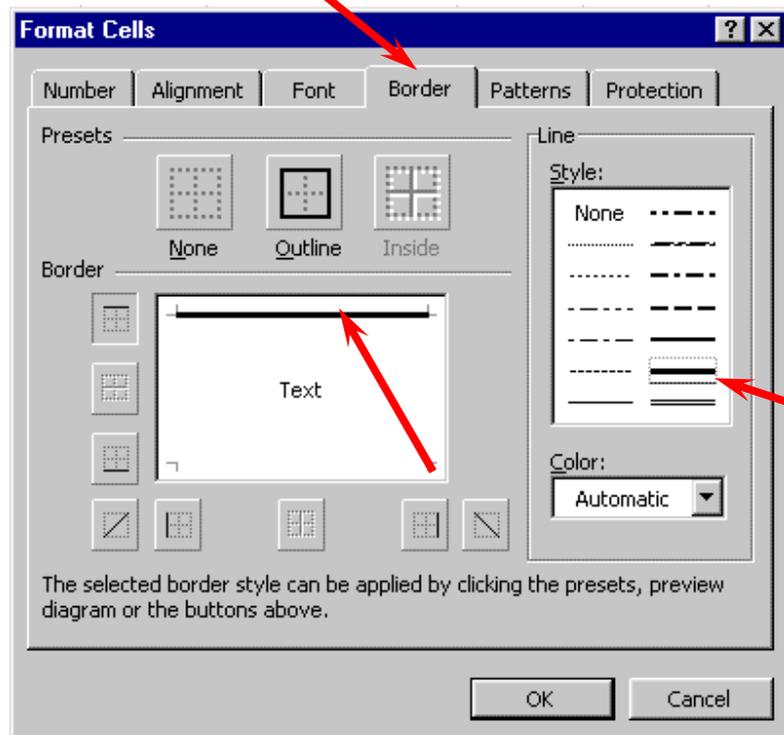
If the thick line does not show-up at the top of the Text box, click-again at the "top line area in the Text box" area and the line will "disappear". Then click-on the thick, single line in the Line Style box again and repeat the previous instructions.

The second way to insert lines into the text box is to **click on the buttons** surrounding the text box area. Try clicking some of the different line buttons **on and off** until you get used to the way they insert lines, notice how the lines appear and disappear. This is called a "toggle" in computer jargon. So, work at this until you have just the thick line showing at the top of the text box. We have just indicated that we want a single thick underline at the top of the cell C7. Point to **OK** and **click** the **left** mouse button.

Now that we have **returned** to the **spreadsheet, click on cell D7,** (this is called "**clicking away**." Sometimes the when working in a particular cell the highlight box hides the lines and clicking away allows you to view the cell you just formatted. You should now **see** a **line** at the **top** of cell **C7**.

Now, type the following numbers into the indicated cells:

C11   30
C12   50
C13   150
C14   70

Now, **underline** the **top** of cell **C15** like you did in cell **C7**.

Widening Columns

As we noticed earlier, **some** of the **words** were just **too wide** for the default **cell width** (Investments and Miscellaneous - just like Bonzo). Let's now **widen column B** to take care of this.

Slowly move the mouse cursor to the upper border where the column letters are shown, then move your cursor to the **right edge** of the **B** cell (**between the B and the C**). It will turn into an **arrow pointing left and right with a small vertical line in the middle.   Hold <u>down</u>** the **left** mouse button and move your mouse to the right,   **dragging the vertical line to the right.**
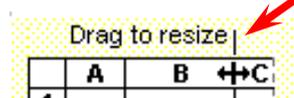
As soon as you **start to drag** a **dotted vertical line** will **go down the spreadsheet** and **move as you hold down the left button and drag the mouse**. **Keep dragging** to the right **until** you are **past** the **widest word** and a bit more (for some space). Release the button. The column is now visibly wider than it was before. Try resizing the column again, this time notice in the upper left corner of the screen, below File in the menu bar, and above the buttons, that as you hold down and drag that it tells you the current width of the column you are resizing.
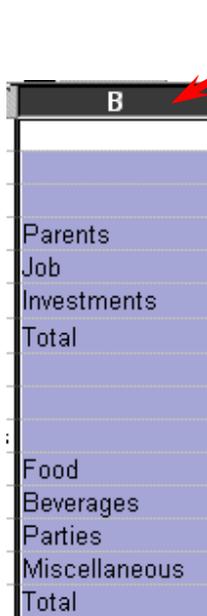
Dragging a column is just one way to resize a column width, here is **another way**. Point your cursor directly at the **B at the top of column B** (in the **Gray** area) and click the left mouse button (The **cell** should turn **black** and the **column** turn **blue**.).

Now, **keeping** the **cursor** somewhere in the "**blue**" area, click the *Right* Mouse **Button**. Notice that the same **menu** we saw before appears, only this time **Column Width** is on the menu. **Click-on Column Width…** and **type in 15 and then click OK**. This is another way to widen a column.
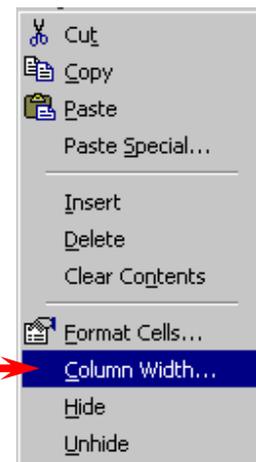
The third and **easiest way** to widen a column is to **let MS Excel do the work for you**.

Once again slowly move the mouse cursor to the upper border where the column letters are shown, then move your cursor to the **right edge** of the **B** cell (**between the B and the C**). Unlike last time, when you see your cursor change into an arrow pointing to the left and right **hold your mouse steady and then click your left mouse button twice quickly.**

When using this *double click* **method** MS Excel automatically changes the column width to fit the longest entry within the column.

Inserting Rows

Oops... we made a **mistake** (on purpose in this case). We **haven't left enough room** at the top of the spreadsheet **to insert** some budget **months**. So... move the cursor to the **gray 2** along the **left** edge (this is the second row) **so we can insert two new rows. Click** the **left** mouse button. You will notice that the whole row goes **blue and the 2 turns black. Make sure** the cursor **arrow** is either **on the 2** or **somewhere in the blue row**.

Click the **righ**t mouse button.   A drop down menu will appear. Point to your cursor to **Insert** and then **click** the left **button**. **Notice** how **one row** was **inserted** and how **everything below row 2 moved down**.

Do this **again on row 2** to **insert another row**. Excel, and all spreadsheets, will remember where they moved your work and automatically adjust for these changes. **Income** should **now** be in **cell A5**.
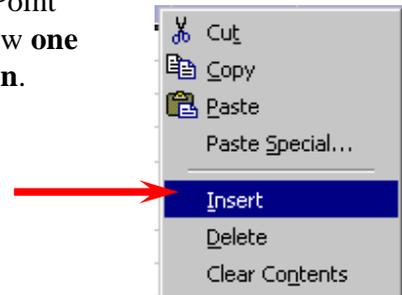
Aligning Cells

Now, type the following information into the indicated cell (remember to type in and then tap the Enter key):

> **C3   SEPT**

Notice again how the word **SEPT** is **automatically aligned to the left**. Logically, since you are using MS Excel in the English version, the text is left aligned so that all of the text lines up nicely in the column cells. One way to horizontally **center SEPT** in the column is to simply **click-on** the **Center button** in the **button bar** at the **top of the screen**. **Make sure** that you are **ON cell C3** when you click (**see image above right**).

Note: Using this method will only horizontally center your text within the cell and will not vertically center your text.

Sept

- ✂ Cut
- 📋 Copy
- 📋 Paste
- Paste Special...
- Insert...
- Delete...
- Clear Contents
- 📝 Insert Comment
- 🖳 Format Cells...
- Pick From List...
- 🌐 Hyperlink...
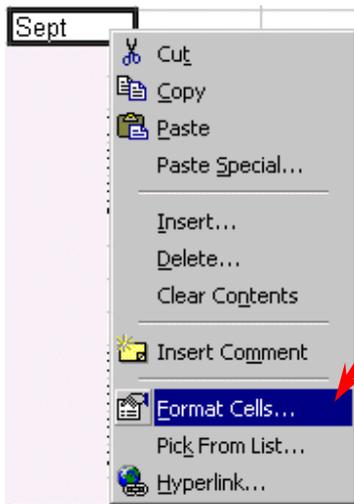
Another way to **center** the word is to simply **click *right*** on cell **C3**. Then click on **Format Cells.**

Format Cells ? X

| Number | Alignment | Font | Border | Patterns | Protection |

Text alignment

Horizontal:
Center   Indent: 0

Vertical:
Center

Text control
☐ Wrap text
☐ Shrink to fit
☐ Merge cells

Orientation

Text

Text ———♦

0 ⬍ Degrees

OK   Cancel

When the **Format Cells Menu** appears**, left click-on** the – **Alignment Tab** and then click-on **the little down arrow located in the Horizontal section, choose *Center*. Next go to the Vertical section and once again choose *Center*. Click OK when you are done**.
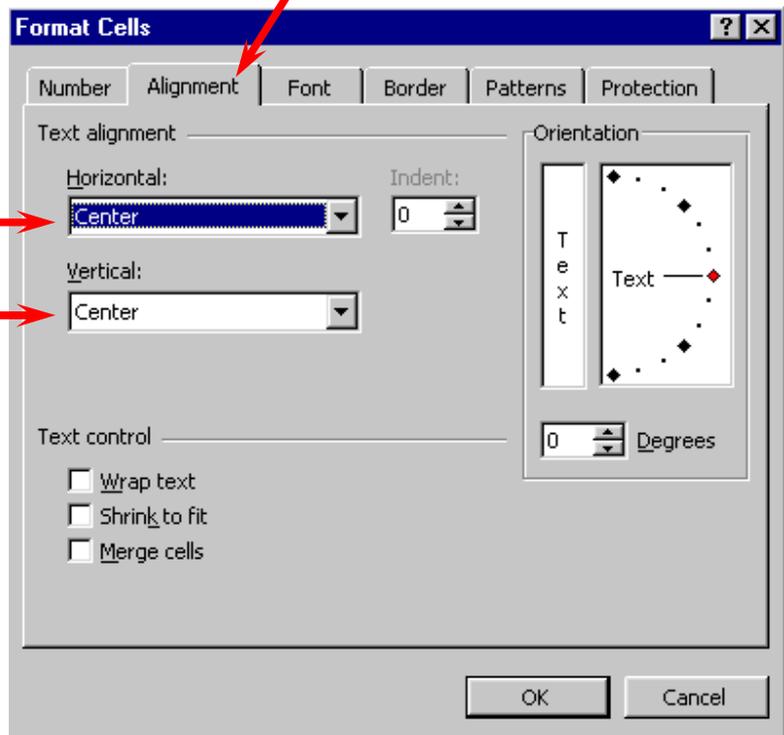
This is how you can align words for neatness. You can also point to several cells you want aligned and do this. We'll try that next.

Now type the following information into the cells indicated.

D3	**OCT**	
E3	**NOV**	
F3	**DEC**	
G3	**MONTHLY TOTALS**	(correct the column width)

Next we'll highlight cells **D3 through G3**. To do this, point to **D3** and click the **Left** Mouse button. Then, **holding down** the left mouse button, *slowly* **move the mouse to the right through cell G3 – when the cells are highlighted – take your finger off of the left mouse button**.

Now **point** your cursor to the **group of highlighted cells** and click the **right** mouse button to bring up the **Format Cells** menu. Left click on the **Alignment tab** and change both the horizontal and vertical setting to **Center**. Then point to **OK** and click the left mouse button.

B	C	D	E	F	G	H
	Janie's Budget					
	SEPT	OCT	NOV	DEC	MONTHLY TOTALS	

Note: You could also click the Center button as you did before, but remember that using the center button will only horizontally center your text.

Now that you have centered the text, MONTHLY TOTALS will **not fit its cell space.** But, you know what to do. Move the cursor over the line between cells G and H and drag the line to the right to widen the G cell just like you did a few minutes ago.

Saving Spreadsheets

We have done quite a bit of work so now is a good time to save our spreadsheet. Point to the **File** menu at the top of the spreadsheet. Point to **Save As.** Left click. A sub-menu box appears like the one at the right.
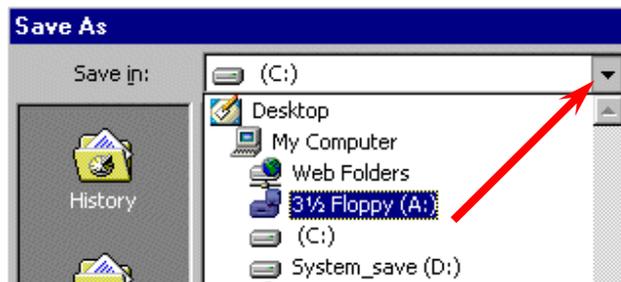
Notice in the **upper left corner** that there is a "**box**" to the **right** of **Save In:** with a down pointing **triangle** to the right. **Click-on** the **triangle**. This will **show** you **all** of the "**drives**" and "**folders**" where you may save your work**. Put a formatted 3 ½ diskette in the A Drive,** then click-on the **3 ½ Floppy (A):** ; this is where you will save your work.

You will then see:
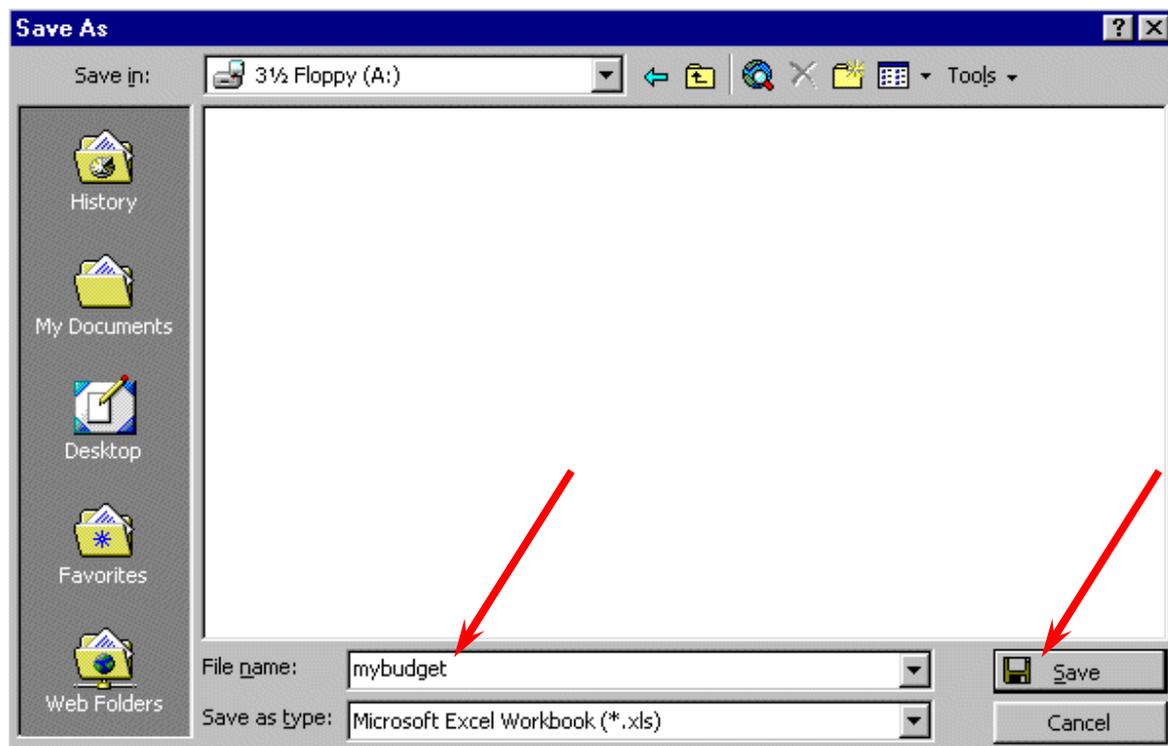
At the bottom of the box and to the right of **File name: Delete** the information that is in the box, (usually Book1.xls) and **type in *Mybudget***. This is the name under which you are saving your file. (In the future you will choose logical names for your spreadsheets as you save them.) Now point to **Save** and click the left mouse button.

Exiting Spreadsheets

Anytime you need to leave your spreadsheet simply click on **File** in the **menu bar**, then click-on **Exit**. If you **have not saved** your spreadsheet, a reminder box will appear **asking you to do so**.

Retrieving Spreadsheets

When you need to **return to a spreadsheet** you first load Excel, as you did originally. When Excel is on the screen, click-on **File** in the menu bar then click-on **Open**. The Open Menu will appear.
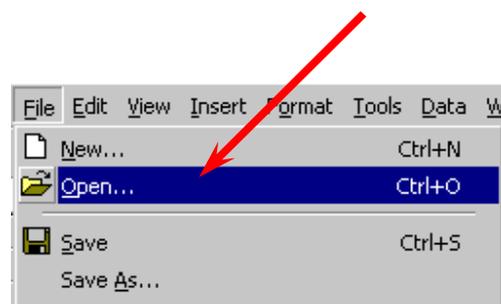
The following menu screen will appear:
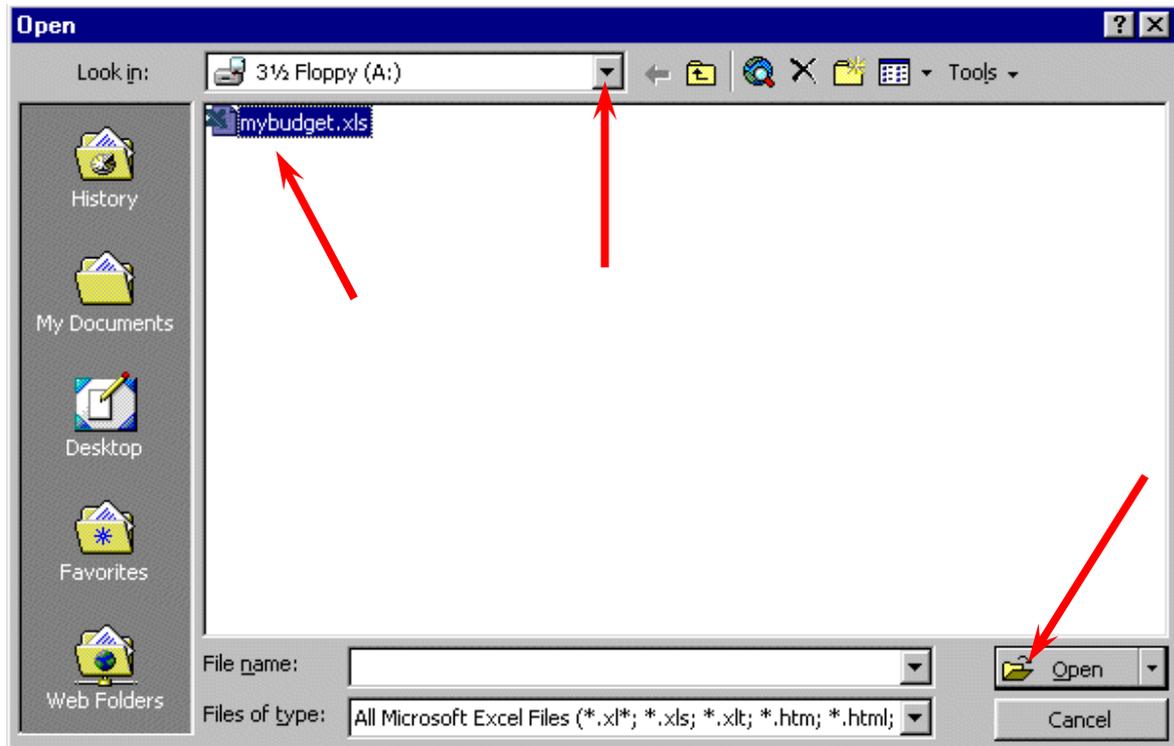
Click on the **down triangle** to the right of the **Look in:** box (Similar to the triangle in the Save in: box). Click-on the **3 ½ Floppy (A:)**. Files saved on the disk will appear in the box below. **Click-on** your file (**MYBUDGET**), then click-on **OK**. Your file will be opened.

*Note: If you view your diskette using **Windows Explorer** or the **My Documents** Icon located on the desktop you could also double-click quickly on the file to open it.*

Also, if you have not done so already, **move your cursor slowly over the "buttons" located below the menu bar**. You will notice a **little box** appears that tells you what these buttons do. These little boxes are called **Text Help** boxes. Many of them will **save** you extra "**clicks**" by using them. Notice, that under File and Edit in the Menu bar, there are a small folder (Open) and a diskette (Save). Clicking-on them will take you directly to Open and Save.

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Adding Numbers

In this section we will learn how to add numbers. There are several ways to do this and each method has its advantages and disadvantages.

Begin by **moving** your cursor to cell **C9,** and clicking-on it.

Note: Always move to the cell where you want the answer to be located.

Type- in Method of Adding Numbers

We want to **add** the three numbers in cells **C6, C7 and C8**. To use this method **type-in** the following formula in cell **C9, DO NOT ADD ANY SPACES BETWEEN YOUR ENTRIES**:

= C6 + C7 + C8   (now tap the enter key)

The **total** of these three cells will now **appear** in cell **C9**. When you have completed typing you will **see** this **formula** in the area **below the menu bar**.
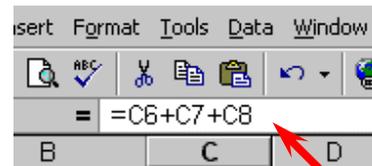
Go **change** the number in cell **C6** to **500** (and **tap Enter**). Watch how the total **AUTOMATICALLY recalculates.**

Whenever a number is entered in a cell the entire spreadsheet will automatically recalculate.

Notice how you typed in an **= (equal sign) before entering the cell locations?** If you had simply typed in C6 + C7 + C8 without the equal sign Excel would have thought this entry was a **word** and just like entering words this entry would have shown as you typed it.

Any time you "create" an error in Excel, you can simply re-type, or by pressing the F2 key, edit the formula to correct the error.

The Type in Method is really easy if you have a **few numbers and can see their cell locations on the screen,** however if you have a lot of cells in the formula this is not such a great method.

Subtraction, Multiplication, and Division

You can put in **a minus sign (-) for subtraction, an asterisk (*) for multiplication, and a slash (/) for division.** Later in this course we'll use some of these other mathematical signs to build some effective formulas.

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Point Method

Again move to cell **C9** and **click-on it**. We'll now add the numbers a second way.

First, **tap** the **equal key (=)** and **then move** the **cursor** to cell **C6 using either the arrow movement keys or mouse**, now **tap** the **plus key (+)** and **move** the cursor to cell **C7**, now **tap** another **plus key (+)** and then **move** the cursor to **cell C8**.

(**Notice** how as you click the plus key (+) **and click on cells,** the addition **formula is being built in cell C9**).

Now tap **the Enter key**. The same formula we constructed previously has now been built using this method.

This **point method** is good when you need to move to **numbers that are spread out all over the place**. Some people like it best and use it all the time -- it's your choice.

Function Method

Move again to **cell C9**.

Now **type in** the following: =**sum(**

[This **tells Excel** that we are going to **sum** some **numbers** in a **Range of cells** which will follow the =SUM(.]

There are now **two ways** to put in this range:

Arrow Key and Anchor Method: Using the **arrow keys, move the cursor to cell C6**. As you move you will notice that the **cell** where the cursor is located **appears** after your =**SUM(**.

When you get to **C6** tap the **. (Period) Key.** This is called an **ANCHOR** and **holds one end** of the **RANGE** in place. You will notice that a **C6:C6 appears**. This is a **one cell range**.

Now **move with the arrow keys to cell C8**. See how cells **C6, C7 and C8 are highlighted**. This indicates the **Range is C6:C8**. Excel assumes, logically, that these are the numbers you want to add. Now tap **Enter**. The numbers still add, but now the formula reads =**SUM(C6:C8)** instead of =C6+C7+C8 like it did before.

Mouse Method: Move again to cell **C9**. Type in   =**SUM(**   like you did before. Now point your mouse cursor to Cell **C6**. Hold down the left mouse button and **drag** the highlight down to cell **C8**. (Cells C6, C7 and C8 should be highlighted.) Now tap **Enter**.

This =**SUM Function** we just learnt is a great way to **add a lot of numbers, or a block of numbers**. By simply anchoring, and using page downs or using the mouse, you can highlight a lot of numbers to add quickly. However, since it only <u>sums</u> you can't do subtraction, etc.

Point to cell C9 again. Tap the Delete key to remove the formula currently in cell C9.

Paste Function

There are a number of **formulas built into Excel** that are **similar** to **Sum**. These formulas are called **Functions**. **Below the Menu Bar** (see **right**) you will see an $''f_x''$. **Click on it.**

A Paste Function Screen like the one **below** will **appear. Take a minute to read over the information**.
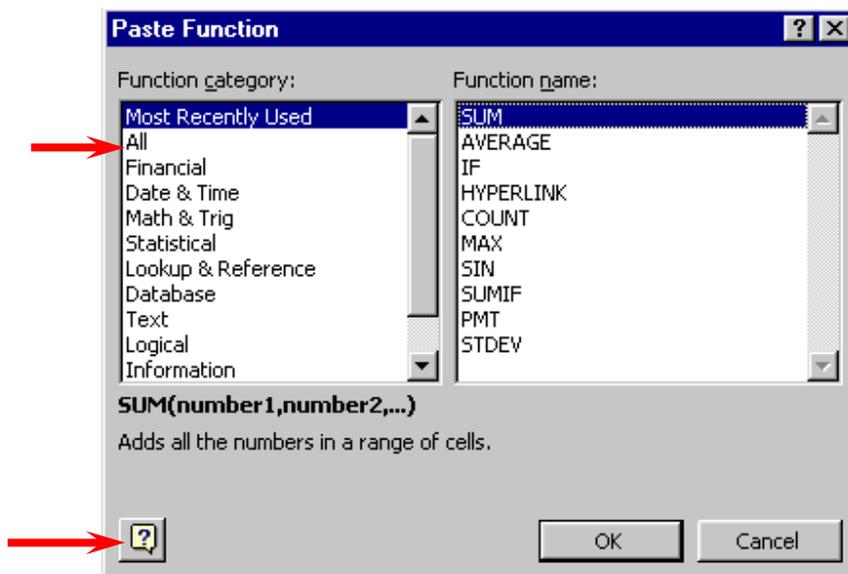
As you can see, there are **all kinds** of **formulas** (**functions**) that come with Excel (e.g. Statistical, Mathematical, Financial, etc.). We're going to use one of these **functions** to add the numbers again.

Click-on the word **All** in the window under **Function Category:** On the right, under **Function Name** you will see a list of **all the function**s in Excel. Click-on the **down triangle** until you come to **SUM**, click-on it. Notice the small box with a **?** (question mark) in the **lower left corner** of the Paste Function window. **Click-on it**.

The "**Office Assistant**" will appear (see **image** on **right**) and you can **ask** it **questions** (the little assistant may be a paper clip or just about anything). **Click**-on the **blue dot** to the **left** of "**Help with this feature"**. You will now **see** a help screen **similar** to the **one below**. When this screen appears, **click**-on the **blue dot** to the **left** of **Help on the selected function** (**arrow below**)
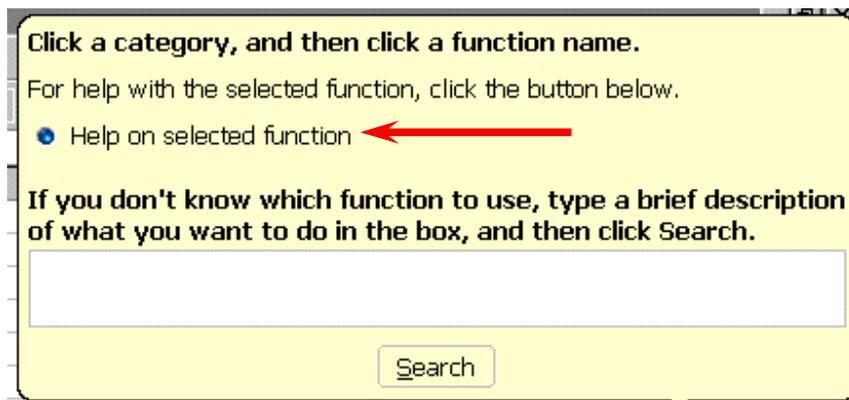
You will **now see** a **Microsoft Excel Help window** appear (**similar** to the one on the **next page**) that will show you **how to use** this **SUM function**, or any function. One of the really **useful** things about these Help windows is that there are **examples** for each function (see **arrow** on **next page**). Take a couple of minutes to look over the SUM Help window and notice all of the features.

Now that we have had a quick review of the Help features, **carefully click**-on the **X** at the **upper right corner** of the blue bar to close the Microsoft Excel Help window (see **arrow** on **next page**). If you accidentally close the spreadsheet, simply reply yes to Save, and then re-open the spreadsheet.

SUM

See Also

Adds all the numbers in a range of cells.

Syntax

SUM(**number1**,number2, ...)

Number1, number2, ... are 1 to 30 arguments for which you want the total value or sum.

- Numbers, logical values, and text representations of numbers that you type directly into the list of arguments are counted. See the first and second examples following.

- If an argument is an array or reference, only numbers in that array or reference are counted. Empty cells, logical values, text, or error values in the array or reference are ignored. See the third example following.

- Arguments that are error values or text that cannot be translated into numbers cause errors.

Examples

SUM(3, 2) equals 5

SUM("3", 2, TRUE) equals 6 because the text values are translated into numbers, and the logical value TRUE is translated into the number 1.

Unlike the previous example, if A1 contains "3" and B1 contains TRUE, then:

SUM(A1, B1, 2) equals 2 because references to nonnumeric values in references are not translated.

Paste Function

Function category:

Most Recently Used
All
Financial
Date & Time
Math & Trig
Statistical
Lookup & Reference
Database
Text
Logical
Information

Function name:

SUM
AVERAGE
IF
HYPERLINK
COUNT
MAX
SIN
SUMIF
PMT
STDEV

SUM(number1,number2,...)

Adds all the numbers in a range of cells.

OK   Cancel

The **Paste Function** menu screen will again appear, click on **OK**. The following menu will appear.

If the **Office Assistant** is **still on the screen** simply point to it and **click** the **RIGHT** mouse button. A pop-up **menu** will appear. Click-on **Hide**. This will put the Assistant away until you need it again

18
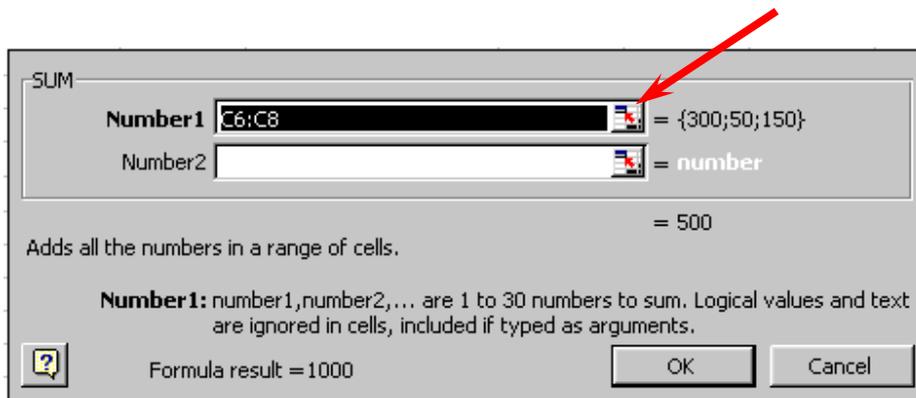
As you can see, in the area to the right of **Number 1**, the "Wizard" has **"guessed"** that you want to add the numbers in the range **C6 to C8**.

Carefully, point to some **"plain"** part in the gray box, (away from the OK and Cancel buttons) then **click** and **hold down** the **left** mouse button, now move your mouse to the right and **drag** the above SUM box **"away"** so that you can see your numbers in **C column cells**. Once you have done this, release the mouse button.

Now **click**-on the "**small box**" on the **right edge** of the **Number 1 area (see arrow above)**. It has a little **red arrow** in it.

A new window box like the one shown **above** will **appear**.

Press the delete key on your keyboard to **Delete anything** that is in the window, and then, **highlight** cells **C6 to C8** in the spreadsheet *(click-on C6, hold down the left mouse button, and drag until the three cells are highlighted.).*

A **"marquee"** will begin to **flash** around the cells, indicating they are highlighted and the highlighted cell will appear in the window box as shown as **above**.

Now **click**-on the **small button** on the **right** of the **cell** (**see arrow in picture above**).

The cell **numbers** you just highlighted will now **show** in the area of the window box to the **right** of Number 1. Now, click-on **OK**. You'll see that the SUM formula [=SUM(C6:C8)] has now been placed in Cell C9.

AutoSum Method

Since we add numbers more than any other operation in spreadsheets, Excel spreadsheet has an additional feature - **Auto Sum**.

Move to cell **C9 again** and tap the **delete** key to **erase** your last formula. Now **look** at the **upper area** of the **screen**, just below the menu bar, for a Σ (summation) symbol **button**. **Point to it and click with the left mouse button.**

Notice that the cells, you might logically desire to add, have a **marquee around them** and that the **SUM** function is displayed in cell **C9**.

You'll need to **confirm** that this is the **correct** formula so **tap** the **Enter key** and the SUM function will now be set in cell **C9**.

Note: You can bypass the confirmation step by first highlighting the cells you want to add before clicking on the summation button, just make sure you leave an empty cell beyond the highlighted cells.

TASK: Now move to cell C17 and practice adding the total Expenses in cells C13 to C16 – try using each of the four methods.

Subtraction

In cell **A19** enter the following title**:**

Net Income

Now **adjust the width of column A to fit your entry**.

In cell **C19** we now want to place a formula that will **subtract** the total of our **Expenses** in cell **C17** from the total of our **Income** shown in cell **C9**. This can be accomplished by using either the **Type-In** Method or **Point Method**. *Go ahead and do this.* Don't forget to tap the Enter key to confirm your formula.

Hint: The formula could look like =C9-C17

More Cell Formatting

We want our **numbers** to **look better**. To do this we'll include **dollar signs** and **decimal points** in our **numbers**.

Point to cell **C6**, hold down the left mouse button and **drag** down slowly to high light cells **C6 through C19**. Your screen should look like the one **below**.

Now **point anywhere** in the **highlighted** area and click the **right** mouse button. Once again that pop-up menu will appear, click on **Format Cells.**

Click-on the **Number Tab** at the top of the Format Cells window. Point your mouse cursor to **Currency** and click-on it.
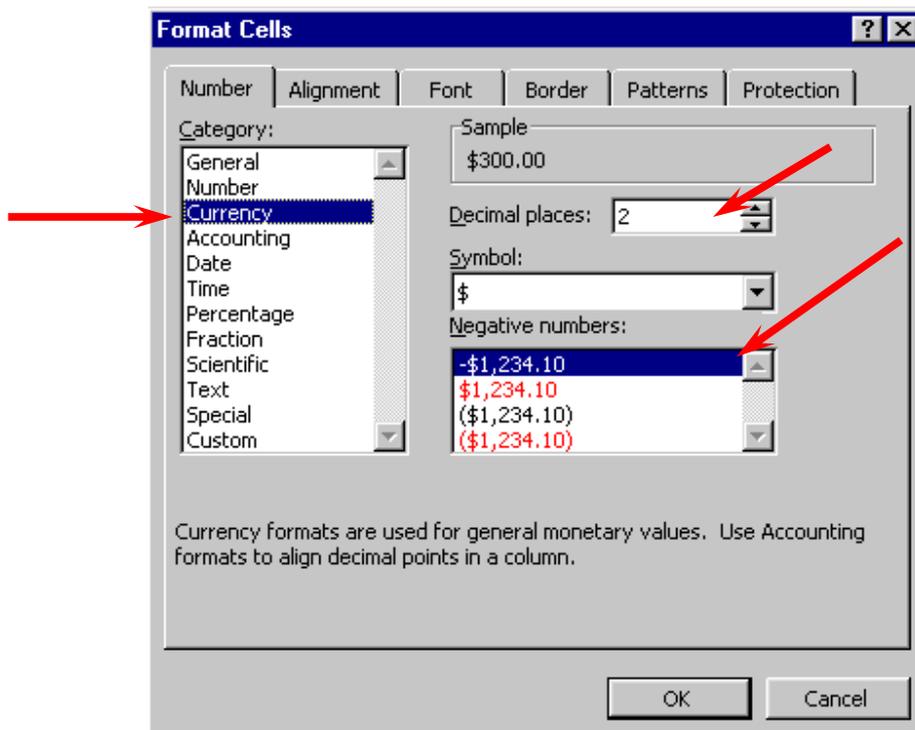
Notice **several things:** The **right side** shows the **number of decimal places. The 2** is the default for cents. We'll use the 2.

Notice above the Decimal Places that there is a **sample** of what our **number will look like.**

At the lower right it shows**, depending on your choice,** how negative numbers can appear. Now click-on **OK**. All the numbers now have $.

If you have large numbers that are **"too wide"** for the current column width you will see some ######## displayed in the cells where these numbers are located. To get rid of ######## and show your number you just need to **widen** the columns as you did previously.

Parents	$300.00
Job	$50.00
Investments	$150.00
Total	$500.00
Food	$30.00
Beverages	$50.00
Parties	$150.00
Miscellaneous	$70.00
Total	$300.00
	$200.00

Your spreadsheet numbers should now look like the one on the left.

Division Percent

Now move to cell **A21** and type in the word **Percent. (I know you remembered to press enter when you were are done entering).**

We're going to calculate a percentage to show how division works and give us some more practice with numbers.

Now move to cell **C21** and using either the **Type-In Method** or the **Point Method,** divide (**/**) the amount for **Income** in cell **C9** by the amount for **Expenses** in cell **C17**. This will give you a horrid number (1.666666667) so we need to put a **percent symbol** with it. Now we'll **repeat** what we did **above**.

Hint: The formula should look like =C9/C17

Point to **C21** and click the **right** mouse button. Point to **Format Cells -then the Number Tab –** then click-on **Percent from the Category List. Use the small up/down arrows to change the decimal places from 2 to 0 (zero). Click OK**. *Good news, our percent total now tells us that our income is 167% higher than our expenses.*

Copying

We could repeat what we did to this point and manually fill in the Income and Expenses for each of the remaining columns, but there is a **simpler way** to do this.

Assuming our income and expense **amounts** are the **same** throughout the remaining months, we want to **copy** the **amounts** in **Column C** to **Columns D, E and F**. This will **require two "steps."**

Move your cursor to cell **C6**. First, we'll **highlight what we want to copy;** next we need to tell the **spreadsheet where we want to place what we've copied**.

So, point to **C6, hold down the left mouse button and drag down the column until cells C6 through C21** are highlighted. Your **highlighted area** should **look like** the one on the **right**.

	A	B	C
1			Janie's Budg
2			
3			SEPT
4			
5	Income		
6		Parents	$300.00
7		Job	$50.00
8		Investments	$150.00
9		Total	$500.00
10			
11			
12	Expenses		
13		Food	$30.00
14		Beverages	$50.00
15		Parties	$150.00
16		Miscellaneous	$70.00
17		Total	$300.00
18			
19	Net Income		$200.00
20			
21	Percent		167%
22			

Now, point to **Edit** in the top menu bar. Click the **left** button and point to **Copy** in the menu that appears. Click the **left** button. The menu disappears.

You will **notice** that once again, when you **highlight** an area, a **marquee** of running lights moves **around** the **copy area**. This allows you to visually confirm that you highlighted the correct area.

Now we'll tell the program **where to copy** the information. Point to cell **D6, click and hold down the left mouse button and drag down and to the right until you reach cell F21** (This will **highlight three columns -- OCT, NOV, DEC.**).

*When you have finished the cell highlighting, your screen should **look like** the one **on the next page**.*

	A	B	C	D	E	F	
1			Janie's Budget				
2							
3			SEPT	OCT	NOV	DEC	
4							
5	Income						
6		Parents	$300.00				
7		Job	$50.00				
8		Investments	$150.00				
9		Total	$500.00				
10							
11							
12	Expenses						
13		Food	$30.00				
14		Beverages	$50.00				
15		Parties	$150.00				
16		Miscellaneous	$70.00				
17		Total	$300.00				
18							
19	Net Income		$200.00				
20							
21	Percent		167%				
22							

Now press the **Enter Key** on your keyboard. Notice how all the numbers, dollar signs and formulas, including the border lines were copied? Using the copy command can save you a lot of time entering information and formatting cells.

Note: You can also utilize the copy and paste buttons in the button bar to do this if you desire.

Entering formulas in the Monthly Totals Column

Move to cell **G6** under the title Monthly Totals. **Choose one of the formulas you learned earlier to add each of the amounts** in **Parents** for the **four months**. **Use any one of the four methods**.

After you have completed your formula **copy** it to the cells **G7 to G19**. You will see some **"$0.00"** in cells **G10, 11, 12, and 18**. This is because there is "**nothing there**" to add. So, go in and **clean-up** these cells by **deleting** the zeros in these cells. (Click on the cell and press your delete key).

Next, go to **G9 and G17** and **underline** like you've did before.

Notice that **we didn't copy** the **percentage** formula when we started this last copying effort. If we had copied a **SUM** formula into cell **G21** it would have added the four percentages. We don't want the sum of the percentages; we **want** a **percentage** of the Monthly Totals. So, we need to copy this percentage separately.

Now, **copy** the **percentag**e formula in cell **F21** to cell **G21**. Next, if you need to, put **$** signs in cells **G6 through G19**.

Absoluting

There are times when we are working with a spreadsheet that we **do not want** a cell to **"roll" to the next column** when we **use** the **copy** feature of the spreadsheet – like it did in our last copying exercise. *(Roll means that the copied formula automatically adjusts itself to the new cell by changing the cell locations within the formula).*

To **stop** the **cells** from "**rolling**" we utilize something called **absoluting**.

Together we'll do the following as an illustration of absoluting:

Go to cell **A23** and type-in **Number**.

Go to cell **A25** and type-in **Result**.

Go to cell **C23** and type in a **2**.

We'll now **create a formula** to multiply our **number** times **Net Income**. You may use either the **Type-in** or **Point** method.

Go to cell **C25,** and type in a formula to **multiply cell C23 times cell C19**.

Hint: The formula should look like: =C23*C19

The result in **C25** should be **two times the net income in cell C19**.

Now **copy** the formula in cell **C25** to cells **D25, E25, F25 and G25**.

UH OH!!!   WHERE DID ALL OF THOSE "0'S" COME FROM?

Using the arrow keys move the cursor to each of the cells **D25, E25, F25 and G25**. **Notice, as you click on each and look at the top of the screen, how C23** (the cell with the 2) **"rolled" and became D23, E23, F23 and G23** (**which are blank cells** - and caused the **"0's"**).

A **blank cell times** a number equals "0." **We want the 2 to be in each formula and not to "roll".**

To do this we utilize something called **Absoluting** or **Anchoring**.

Go back to cell **C25**. Now we'll **enter the formula again**, but a **little differently to anchor the 2**.

Type in a **=C23** (or you could type = and point to C23).   **Now tap the F4 key**. **Notice**, in the **Edit bar** at the **top of the screen**, that the **=C23 changes to: $C$23**. (This tells you that cell **C23** is **absoluted** or anchored. The **"$'s"** indicate the absoluting.)

Now **finish the formula** by typing in or pointing ***C19** as before. Tap **Enter**.

Hint: The formula should look like: =$C$23*C19

Now **copy** the formula in cell **C25** to cells **D25, E25, F25 and G25** again. (You can do this right overtop of those zero's in the cells).

The numbers should now be **correct**. Move your curse to cells **D25, E25, F25 and G25** like you did before. You will notice the **"$'s"** have **copied** the **=$C$23** to **each cell (absoluting)** and the Net Income figures have rolled as they should.

Absoluting is something that can save you a lot of time, therefore it is one excel command that is good to know and understand.

Graphics

As you may or may not know, graphics are an excellent way to display and explain your work.

We are now going to turn your spreadsheet numbers into graphics -- bar charts, pie charts, etc.

Before we can create a chart there are a couple of **essential steps**. First we have to **tell** the "Chart Wizard" **what we want to chart** and then **where** we want the chart to be placed.

In cell **B9** type *in* **Income** (to replace the word Total).

Next, in cell **B17** type in **Expenses** for the same reason.

VERY IMPORTANT……….

Hold down the left mouse button and **highlight cells B3 to F3**.

Next **HOLD DOWN** the **Ctrl** key at the **bottom of the keyboard**, and **while you are holding it down, highlight cells B9 through F9**. You will now **see two different "ranges" highlighted**.

Hold down the Ctrl again, and highlight cells B17 through F17. These three ranges will make up your chart.

When you complete the previous instructions, your screen should look like the one below.

	A	B	C	D	E	F	
1			Janie's Budget				
2							
3			SEPT	OCT	NOV	DEC	MONTI
4							
5	Income						
6		Parents	$300.00	$300.00	$300.00	$500.00	
7		Job	$50.00	$100.00	$200.00	$50.00	
8		Investments	$150.00	$150.00	$150.00	$150.00	
9		Income	$500.00	$550.00	$650.00	$700.00	
10							
11							
12	Expenses						
13		Food	$30.00	$100.00	$30.00	$30.00	
14		Beverages	$50.00	$50.00	$50.00	$50.00	
15		Parties	$150.00	$150.00	$150.00	$150.00	
16		Miscellaneous	$70.00	$70.00	$70.00	$70.00	
17		Expenses	$300.00	$370.00	$300.00	$300.00	
18							

We'll use the **easiest method** for our first chart (graph).

In the **Menu Bar** click-on to **Insert**, then in the menu that appears, click on **Chart.** The following window appears.
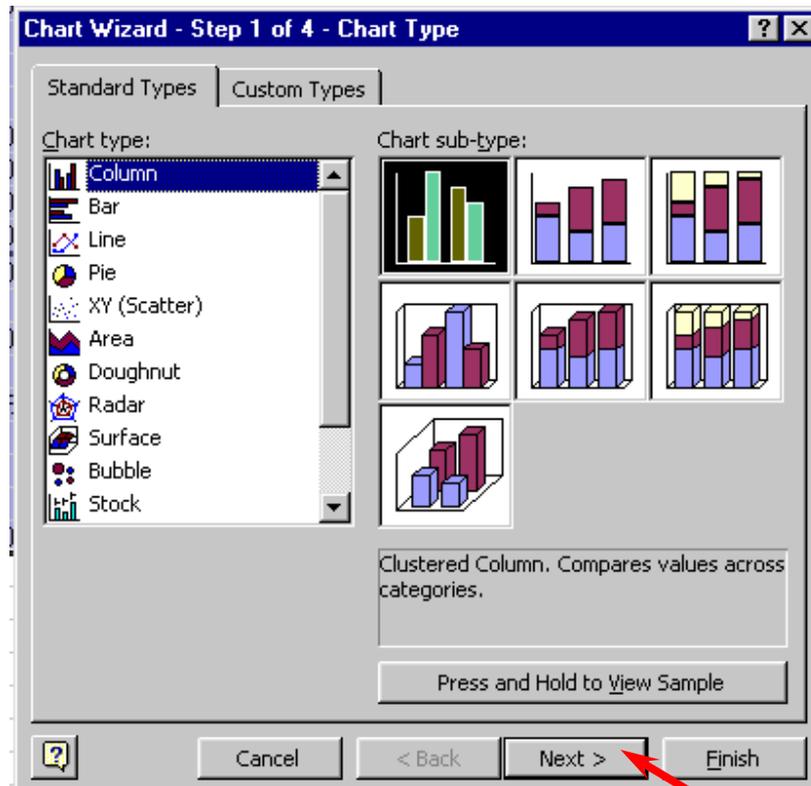
The **Chart Wizard** now appears. The various types of charts are shown in the **Chart type section** on the **left**. **Examples** of the selected chart type are shown show on the **right** under **Chart sub-type**.

We'll use the **Column** chart type and the **Chart Sub-type** already selected.
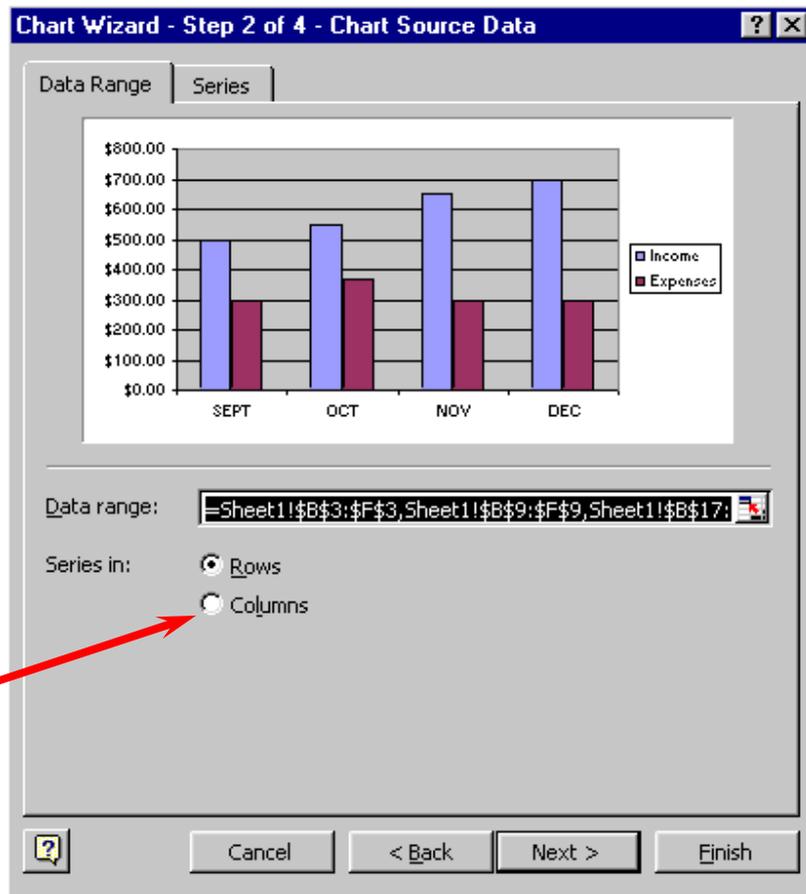
Click on **Next**.

Chart Wizard now displays **what your chart will look like**.

The "**ranges**" you **selected** originally are **shown** in the **Data range:** area. **If you did not highlight the cells as were indicated, your chart won't "look right." Your chart should look like the example above**.

Take a second now to click on the **Series tab** at the top of the Chart Wizard box; you'll see a new Wizard screen that shows the cells where the Income and Expenses series came from.

Return back to the Data Range by clicking the Data Range tab at the top.

In the "Series-in" section of the Chart Wizard, **click on** the **little circle** in front of **Columns**.

The Wizard will indicate that the chart has been "rotated" 90 degrees and thus the axis has changed. Return to the **Row** display type by clicking the **small circle** in front of **Rows**.

Click the **Next** button.
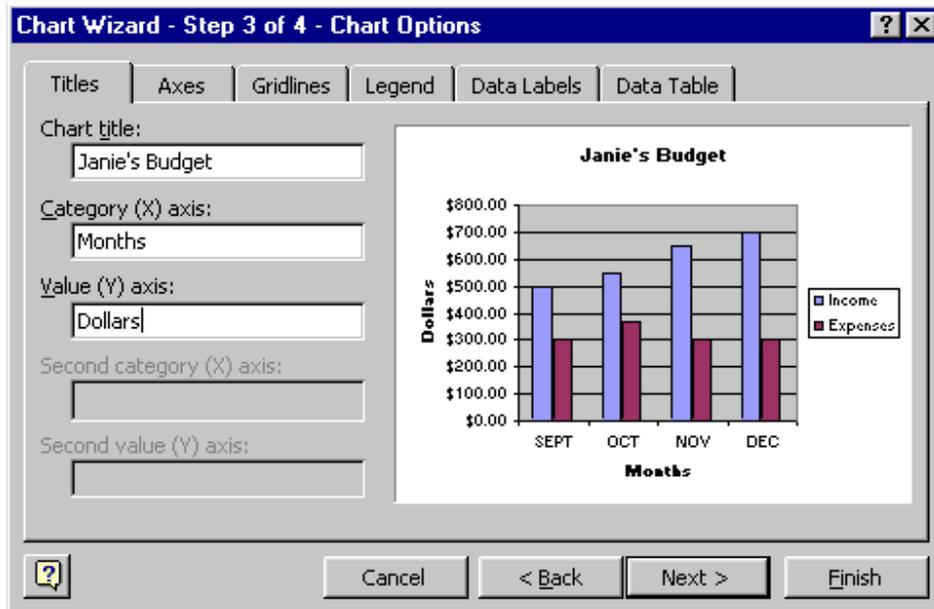
Now the final step: **Titles**.

Click-in the **blank** space located under **Chart Title**. A flashing cursor will appear.

Type in your name with an apostrophe (') s and the word Budget (ex. Janie's Budget).

Now, **click**-in the area under **Category (X) axis:** and type in: **Months**.

Next, **click**-in the area under **Value (Y) axis:** and type in: **Dollars**.

As you enter your information into the blank spaces the picture of your chart immediately changes to give you an "instant" view of your final chart.

You may have also noticed that there are several other **tabs** at the **top** of the Chart Wizard box.

Take a moment to **click on** the **Legend tab**. The **legend** is the **small box** on the **right**, which **indicates** what the **colors** of the "**bars**". Using this legend tab you can turn off the legend display, or relocate the legend box elsewhere in your chart. Try clicking some of the **placement** choice to see how they look.

Click the **Next** button one last time.
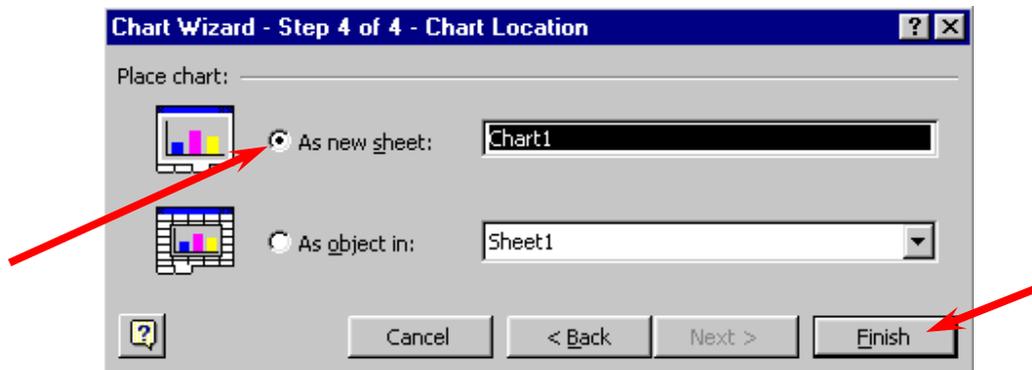
This is the final step in the Chart Wizard. You'll notice that it asks you **where** you want to **put** your **chart**. Since this is your first chart, it is best if you select **As a new sheet:** (see **arrow above**). This will put your chart on a **new tab** called **Chart 1**.

Now click-on **Finish.**

You'll see that you chart has a tab of its own at the bottom of the screen, and "fills" an entire screen.

Notice that Excel created a **new tab** at the bottom of the spreadsheet that says **Chart 1**. Any time the numbers change where your data is entered on **Sheet 1**, the bars in the chart will reflect the change automatically.

Click on the **Sheet 1** and **Chart 1 tabs** to get the feel of going back and forth between the data and the chart.

In **Excel** when you save your **spreadsheet** you also save your **graph.**

Whenever your **graph** is **visible**, you can **point** to **any area** of the graph, and **click** the **right mouse button** on the area, and then by choosing **Format Chart Area**, **edit** that particular area. Editing an area allows you to change the font type, chart colour, text alignment, etc.

Right click on your chart. In the menu that appears, click-on **chart type** and then change the chart to a different type. Take a few minutes to experiment with the different types of charts**.**

There are many other things that excel can do but with the limited time we have for this course we shall now call it a day and get out of MS Excel for Windows. First, let's **save** your work one last time. Point to the **File** menu and click the left button. Point to **Exit**. Click the left button to shut down MS Excel.

Thank you for your time and patience.