Data Entry, Cell Formatting, and Cell Protection in Excel 2003

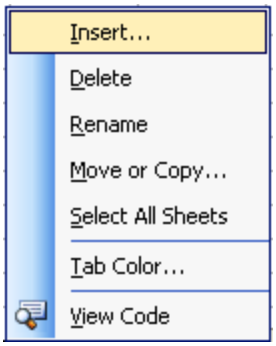
In this workshop, you start by adding to the number of sheets in your workbook and then grouping four of the sheets to set up a small spreadsheet report that will contain quarterly data for four departments. You will also create a summary sheet. As you proceed to develop these report spreadsheets, you will use the MERGE AND CENTER feature, the AUTOFILL feature, and the AUTOSUM feature. You will also learn how to name ranges and use them to facilitate data entry. Along the way, you will do some cell formatting, and then cell protection.

Add more sheets to a workbook

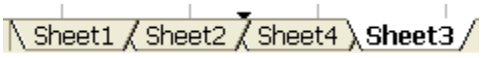
Your new workbooks come with three worksheets. You can change that default on your own computer as follows:

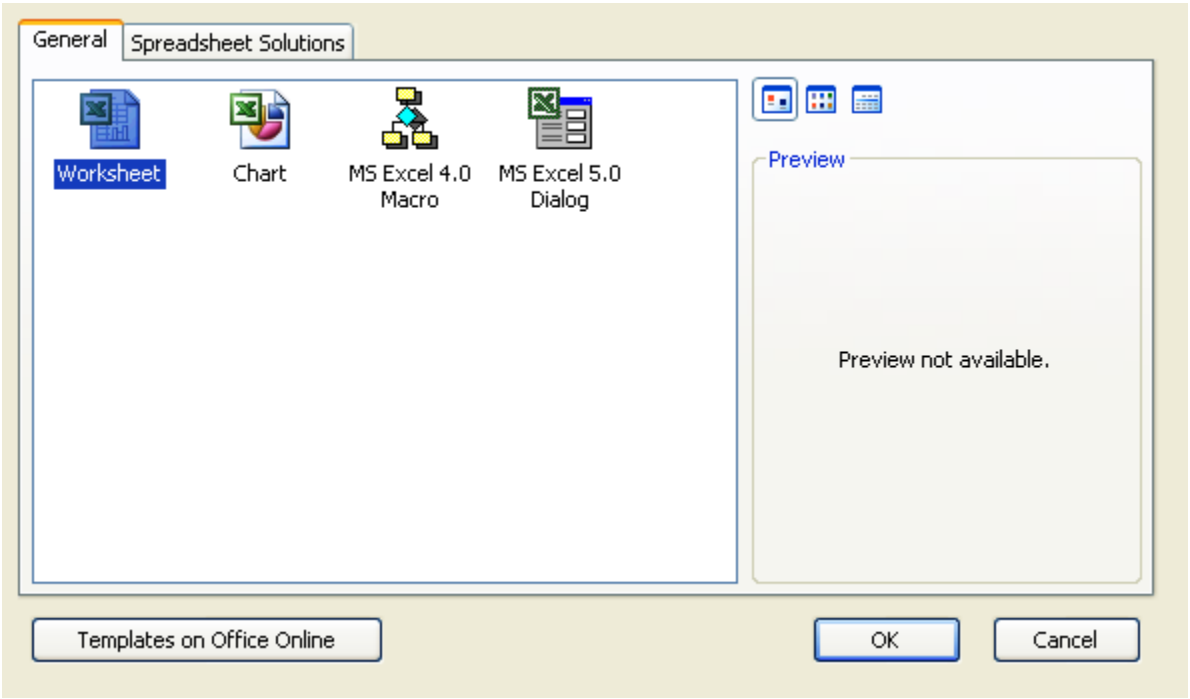
1. Drop down the TOOLS menu and click on OPTIONS.
2. Click the GENERAL tab.
3. See the entry SHEETS IN NEW WORKBOOK. You see that this entry is set at 3. You can change it to any number of worksheets you want. On the current workbook, there are three sheets.

Add two sheets to the current workbook



1. Right-click on SHEET 3 tab.
2. From the pop-up menu, click on INSERT.
3. In the INSERT dialog, click to highlight worksheet then click on OK. Below, see a screen picture of the INSERT dialog with the blank *Excel* sheet highlighted.
4. Notice that your sheet numbers are out of order.
5. Drag SHEET 3 tab to the left over SHEET 4 tab. When you see the marker between Sheet 2 and Sheet 4, release the mouse. See the graphic below that shows the small marker between sheets 2 and 4.



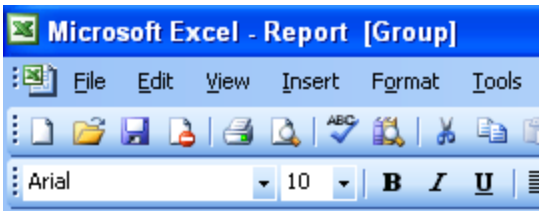


6. Click on SHEET 4 and add one more sheet as instructed above and move the sheets so they are in order.
7. Later in this lesson, you will learn how to change the sheet names so that they better reflect the content of the particular sheet.
8. Save this EXCEL file and name it REPORT.

Using grouped sheets

Since the small quarterly report spreadsheets you will set up will be similar, and identical in some respects, you will save time when you group four sheets for the four quarters, and enter the identical parts of the spreadsheets at the same time.

Group sheets 2, 3, 4, and 5



1. Click on Sheet 2.
2. Hold down the Ctrl key and as you continue to hold it down, click on sheets 3, 4, and 5, then release the Ctrl key. What you enter on Sheet 2 will now be entered on all four sheets at the same time.
3. Notice on the Title Bar, following the file name is the word **Group** in brackets.

Enter and format the title of the report spreadsheets

At the right is a screen picture of the report that is on Sheet 2, after it has been finished when grouped except for the months, which will be entered after the sheets have been ungrouped.

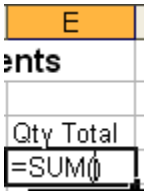
	A	B	C	D	E
1	Quarterly Report of Departments				
2					
3		January	February	March	Qty Total
4	Dept 1				0.00
5	Dept 2				0.00
6	Dept 3				0.00
7	Dept 4				0.00
8	Totals	0.00	0.00	0.00	0.00

1. In cell A1, type **Quarterly Report of Departments** and press Enter.
2. Drag over cells A1, B1, C1, D1, and E1 to select these cells.
3. Click on the Merge and Center button on the Formatting toolbar. This command causes these columns to be merged and the title to be centered in the merged column.
4. Now select a larger font size from the Formatting toolbar for the title and click on the B icon to bold it.

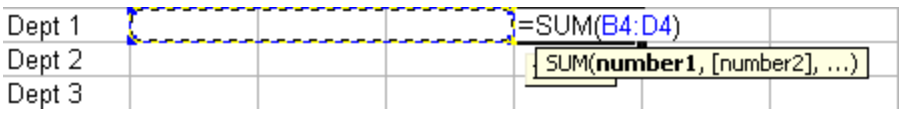
Enter row and column labels

1. In cell A4, type **Dept 1**.
2. With cell A4 the current cell, move the cursor to the lower right corner of the cell until the cursor acquires the shape of a "+" sign.
3. Using the AutoFill feature, drag the cursor down over cells A5, A6, and A7. Note that AutoFill has automatically entered Dept 2, Dept 3, and Dept 4 down the column.
4. In cell A8, type **Totals**.
5. You will not type in the column labels with the sheets grouped (except for the total column), because those titles are not identical for the four quarters.
6. Click on cell E3, type **Qty Total** and press Enter.

Enter formulas that will sum the numbers



1. With the cursor in cell E4, click on the AutoSum icon.
2. You see the insertion point inside the parentheses **in the following formula: =SUM( )**
3. Drag to select cells B4, C4, and D4. You will see the range B4:D4 selected and placed inside the parentheses .
4. Press Enter.
5. With the cursor in cell E4, use the AutoFill feature by moving the cursor to the lower right corner of the cell, and when the cursor is the shape of an "+" sign, drag down over cells E5, E6, and E7.

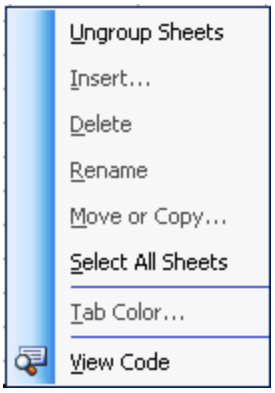


6. Place the cursor in cell B8 and click on the AutoSum icon on the Formatting toolbar.
7. With the cursor inside the parentheses, click on cell B4 and drag to cell B7 so that the SUM formula now contains the cell range of B4:B7. Press Enter.
8. With the cursor in cell B8, use the AutoFill feature by moving the cursor to the lower right corner of the cell, and when the cursor is the shape of an "+" sign, drag to the right over cells C8, D8, and E8.

Format the cells that will contain the totals

1. Select the cell range A8:E8.
2. Drop down the FORMAT menu and click on CELLS command.
3. See the CELL FORMAT dialog, and click on the PATTERNS tab.
4. Select a pale color to shade the cells that will contain the totals and click on the OK button.
5. In the partially finished spreadsheet, note that since there is no data entered, all the cells that contain the SUM formulas contain zeros. Before entering any data, you will have to ungroup the sheets.

Ungroup the sheets



1. Right-click on the SHEET 2 tab.
2. See the pop-up menu and click on UNGROUP SHEETS.

Rename the Sheet Tabs

Renaming your sheet tabs will assist you in identifying which sheet holds which spreadsheet data. Do not put any spaces in the names. It is easy to do, as follows:

1. Double-click on the Sheet1 tab, and type **Summary** then press the ENTER key.
2. Double-click on the Sheet2 tab, and type **Qtr1** then press the ENTER key.
3. Double-click on the Sheet3 tab, and type **Qtr2** then press the ENTER key.
4. Double-click on the Sheet4 tab, and type **Qtr3** then press the ENTER key.
5. Double-click on the Sheet5 tab, and type **Qtr4** then press the ENTER key.

Complete column labels individually

1. On QTR1 sheet, type **January** in cell B3.
2. Use the AUTOFILL feature and fill in **February** and **March** in cells C3 and D3.
3. Click on sheet QTR2 and cell B3. Enter **April** and use the AUTO FILL feature to fill in **May** and **June**.
4. Click on sheet QTR3 and cell B3. Enter **July** and use the AUTOFILL feature to fill in **August** and **September**.
5. Click on sheet QTR4 and cell B3. Enter **October** and use the AUTOFILL feature to fill in **November** and **December**.
6. See a screen picture of the report on sheet QTR1 at right.

	A	B	C	D	E
1	Quarterly Report of Departments				
2					
3		January	February	March	Qty Total
4	Dept 1				0.00
5	Dept 2				0.00
6	Dept 3				0.00
7	Dept 4				0.00
8	Totals	0.00	0.00	0.00	0.00

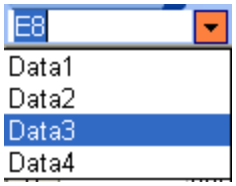
Name the data ranges for each sheet

When you want to be able to select a range of cells, or use a range of cells in a formula, it helps to name the data ranges. When you name a cell or a range of cells, that cell or range becomes an absolute address.

You will select the data range in each sheet and name it, so that when you are ready to format the data cells, you will select the data range name, and that range of cells will be selected. A range name must start with either a letter or an underscore and it cannot contain spaces. The maximum length is 255 characters, but you would probably want to make the name as short as possible.

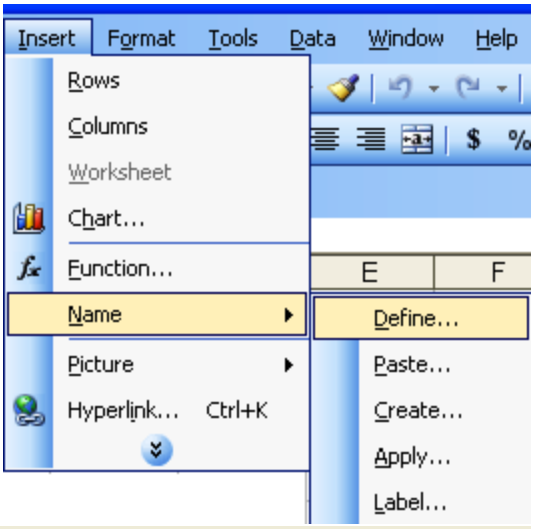
1. On sheet QTR1, select the range B4:D7.
2. Click in the NAME BOX and type in **Data1**, with no space between the letters and the number in the name (let this stand for the data for QUARTER 1), and press ENTER.
3. On sheet QTR2, select the range B4:D7.
4. Click in the NAME BOX and type in **Data2** (the data for Quarter 2) and press ENTER.
5. On sheet QTR3, select the range B4:D7.
6. Click in the NAME BOX and type in **Data3** and press ENTER.
7. On QTR4, select the range B4:D7.
8. Click in the NAME BOX and type in **Data4** and press ENTER.

Note: See at the right, a screen shot of the data ranges that have been named according to the above instructions.



Edit the Range Name ranges

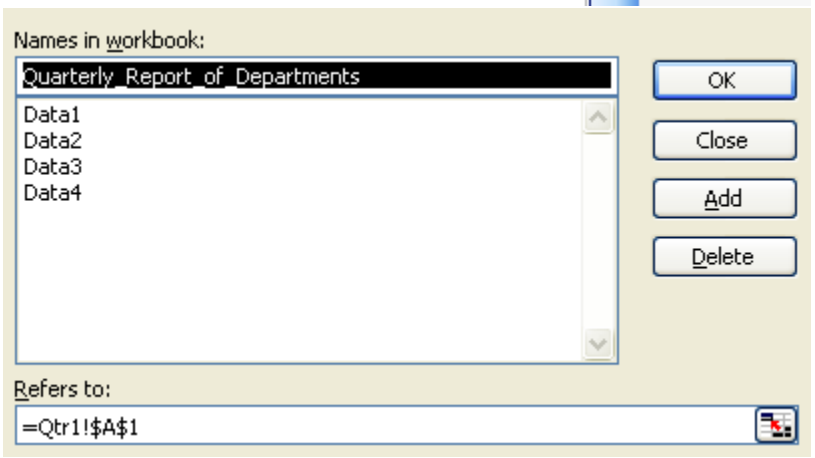
If you have made an error in selecting a range, and you have already named it, you may want to simply edit the range identified with the name. If so, use the NAME command on the INSERT menu and choose DEFINE on the menu which appears. See the screen picture of these menus at the right.



When you select DEFINE, you will see the NAMES IN WORKBOOK dialog, which lists all the range names you have defined for the workbook. Click on any of the names and you will see in the REFERS TO box, the range address. Here is where you can modify the cell range if needed. You can also delete any range name here. You can also define a new range name by typing in the name, specifying the range, and then clicking the ADD button. See the screen picture of this dialog box below right.

Movement keys in Selected Cells

You will now use a selected range to enter the first quarter data. When you are entering data in cells that have been selected, you will use the TAB key to move from cell to cell through the selected range.



If more than one range of cells is selected, the TAB key will cycle through all the cell ranges. As you enter the data in each cell then press the TAB key, the active cell automatically changes to the next cell in the selected range; the cells remain highlighted as you type. After data has been entered into all the selected cells, the active cell changes back to the first cell of the range.

This procedure may or may not be of sufficient benefit to appeal to persons entering data into a small, contiguous block of cells, but it would be a very good way to enter data into cells that are spread across the spreadsheet. If such separated cells were selected and named, then they could be selected simply by choosing that range name. In a selected cell range, you can also use the ENTER key to move to the cell below, the SHIFT+TAB keys to move back one cell, and the SHIFT+ENTER key to move up to the cell above the current cell. Clicking in a cell with the mouse will cancel the selection.

Entering and Editing Data

Enter data for the first quarter on sheet Qtr1

1. With sheet QTR1 in view, click in the NAME BOX and select DATA1. Note the range of cells that are highlighted. **Do not click in any cell to enter data**, as that would cancel the highlight. Just begin to enter the numbers, and the first number you enter will automatically be placed in the first cell of the range.
2. Press the TAB key each time you have completed entering a number in a cell. Note as you continue to enter the data and press the TAB key, the cursor will move to the next row automatically when the end of a row is reached. To return to the previous cell to correct an error, press SHIFT-TAB.
3. Enter data for QUARTER 2, as instructed above for QUARTER 1.

Edit data

There are two ways to edit your data quickly—editing directly in the worksheet cell or editing in the FORMULA BAR. To edit directly in the cell, you can either double-click the cell or press F2 to edit a specific part of the entry. To change the entire cell contents, simply type the new entry over the old entry and press ENTER. To edit using the FORMULA BAR, select the cell and click once in the FORMULA BAR.

Two elements exist in a cell—the data and the formatting. When the DELETE key is used on a selected cell, only the data is removed, leaving the formatting in the blank cell. The next time data is entered into the cell, the formatting which remained in the cell is applied to the new data. To clear both the data and the formatting in the current cell or highlighted range, choose EDIT > CLEAR, A11.

The UNDO tool on the STANDARD toolbar now has a drop-down arrow that enables you to see the specific actions you will be undoing. The maximum number of actions you can undo is 16.

Shortcut keys for editing data

Press	To
F2	Edit the active cell and put the insertion point at the end of the line
ESC	Cancel an entry in the cell or formula bar
BACKSPACE	Delete the preceding character in the active cell as you edit the cell contents
ENTER	Complete a cell entry

Set up the Summary Report

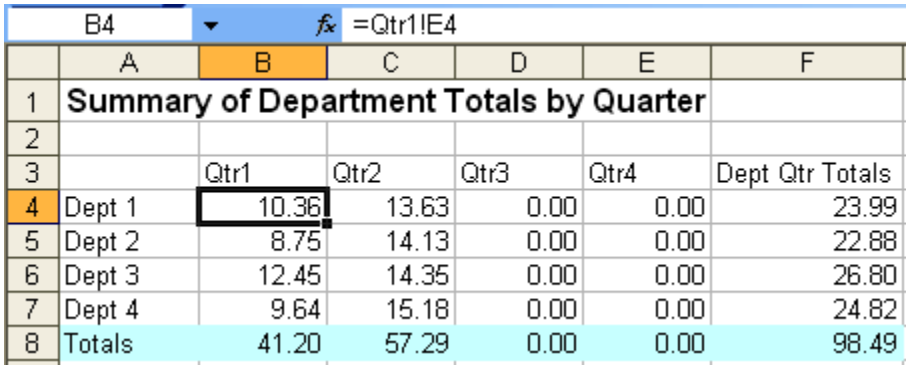
You can set up a summary report even if you have not yet entered all the data into the quarterly reports. The summary report will be continually updated as you enter the data in the quarterly reports.

Set up the Summary sheet

1. Click on SUMMARY tab.
2. In cell A1, enter the title, **Summary of Department Totals by Quarter** and press the ENTER key.
3. Highlight the cell range A1:F1 and click on the MERGE & CENTER button on the FORMATTING toolbar.
4. Enlarge the type of the title and make it bold.
5. Click in cell A4, and type **Dept 1** then use AUTOFILL to fill cells A5:A7 (with Dept 2, Dept 3, and Dept 4).
6. In cell A8, type **Totals** and press ENTER.
7. In cell B3 enter Qtr1 then use the AutoFill feature to fill in Qtr2, Qtr3, and Qtr4 in cells C3:E3.
8. In cell F3, type **Dept Qtr Totals** and double-click on the column line to make the column wider.
10. In cell F4, click on the AUTOSUM icon and check to see that the Sum range is correctly identified (B4:E4) then press ENTER.
11. Use the AUTOFILL feature to insert the formula from cell F4 down the column into the cell range F5:F8.

Bring (link) values of cells from other sheets into the summary

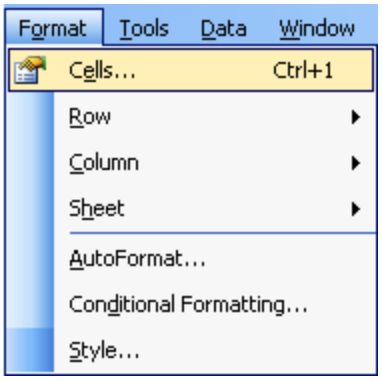
1. In cell B8, type an equal sign (=).
2. Click on QTR1 tab then click in cell E8 and press the ENTER key. You are returned to the Summary sheet.
3. In cell C8, repeat steps 1 and 2 except substitute QTR2 tab for QTR1 tab.
4. In cell D8, repeat steps 1 and 2 except substitute QTR3 tab for QTR1 tab.
5. In cell E8, repeat steps 1 and 2 except substitute QTR4 tab for QTR1 tab.



	A	B	C	D	E	F
1	Summary of Department Totals by Quarter					
2						
3		Qtr1	Qtr2	Qtr3	Qtr4	Dept Qtr Totals
4	Dept 1	10.36	13.63	0.00	0.00	23.99
5	Dept 2	8.75	14.13	0.00	0.00	22.88
6	Dept 3	12.45	14.35	0.00	0.00	26.80
7	Dept 4	9.64	15.18	0.00	0.00	24.82
8	Totals	41.20	57.29	0.00	0.00	98.49

Note: See above a screen picture of a portion of the completed summary sheet. Note the active cell (B4) and that the formula this cell contains is displayed in the Formula Bar at the top of the screen picture. You can see in that formula that the value is found on the sheet named Qtr 1 and in the cell E4 (E is the totals column on the Qtr 1 sheet) and the row 4 on that sheet contains the Dept 1 data.

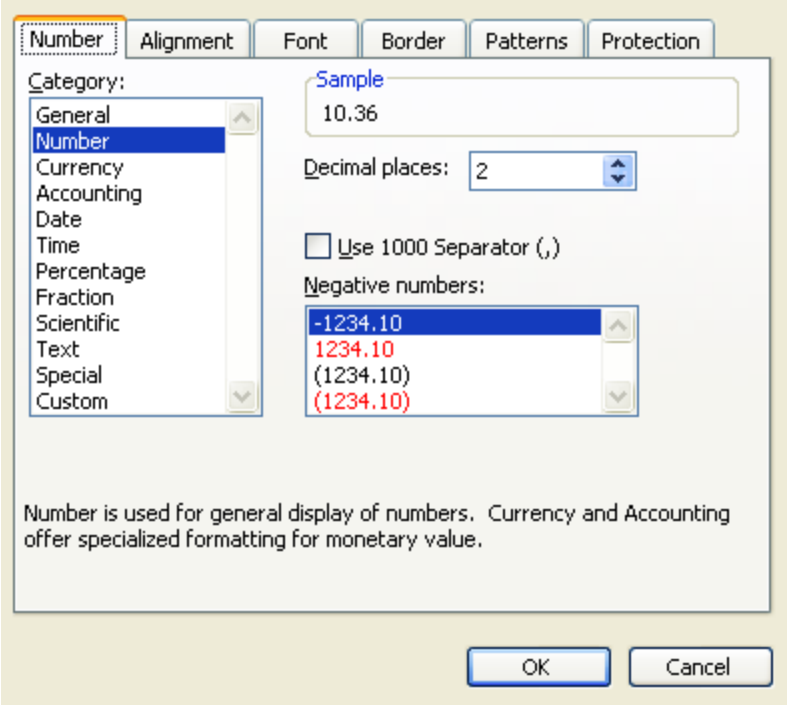
Formatting Cells



You open the FORMAT CELLS dialog with the CELLS command on the FORMAT menu. This dialog contains the following tabs: NUMBER, ALIGNMENT, FONT, BORDER, PATTERNS, PROTECTION.

Number formats

There are several categories of number formats as listed under CATEGORY on the NUMBER panel. See the screen picture below right.



General

The GENERAL number format is the default number format. Mostly, when you enter a number in a cell that is formatted with the GENERAL format, that is what is displayed. If the cell is not wide enough to show the entire number, the GENERAL format rounds numbers with decimals and uses scientific notation for large numbers.

Number

The NUMBER format is used for general display of numbers. You can set decimal places and indicate thousands separator.

Currency

CURRENCY formats are used for general monetary values. This format provides you with a choice of the following symbols: dollar sign, English pound sign, Euro currency sign, and miscellaneous currency signs for other countries.

Accounting

ACCOUNTING formats line up the currency symbols and decimal points in a column.

Date

DATE formats display date or date and time. Under TYPE, select the way in which you want a date or date and time displayed.

Time

TIME displays time formats and some data and time formats. Under TYPE, you can select how you want time or date and time displayed.

Percentage

Numbers above 1 are automatically entered as percentages; and numbers below 1 are converted to percentages by multiplying by 100. For example, entering 10 results in 10%, and entering .1 results in 10%. To have all numbers converted by multiplying by 100, on the TOOLS menu, click OPTIONS, click the EDIT tab, and then clear the ENABLE AUTOMATIC PERCENT ENTRY check box. To quickly display numbers as percentages of 100, click the PERCENT STYLE icon on the FORMATTING toolbar.

Fraction

Under TYPE, you can choose how you want a fraction displayed. To avoid entering a fraction as a date, precede fractions with a **0** (zero); for example, type **0 1/2**.

Scientific

You can choose the number of decimal places you want displayed in the scientific notation. To display numbers in scientific format, use "E-," "E+," "e-," or "e+" exponent codes in a section. If a format contains a 0 (zero) or #

(number sign) to the right of an exponent code, Excel displays the number in scientific format and inserts an "E" or "e". The number of 0's or #'s to the right of a code determines the number of digits in the exponent. E- or e- places a minus sign by negative exponents. E+ or e+ places a minus sign by negative exponents and a plus sign by positive exponents.

Text

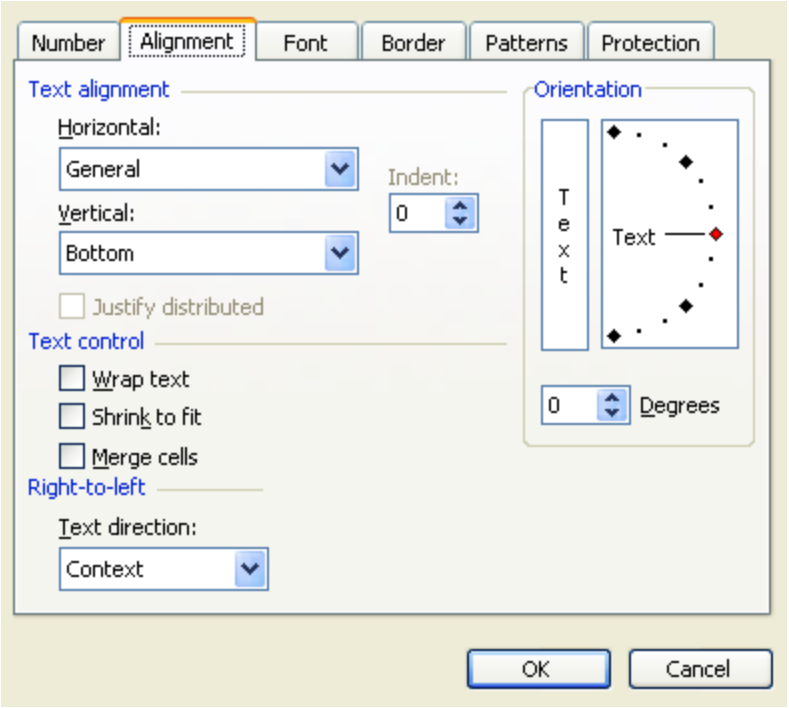
Excel stores numbers as numeric data even if you later apply the text format to cells that contain the numbers. If you want *Excel* to interpret numbers such as part numbers as text, first apply the text format to empty cells and then type the numbers. If you have already entered the numbers, you can change the numbers to text data. If the numbers are aligned to the left of the cell and if you have not changed the default alignment (GENERAL), the numbers are formatted or entered as text.

Special

When you chose SPECIAL in the CATEGORY list, you have the choice of the following types: Zip code, Zip code + 4, Phone number, or Social Security number.

Custom

You type the number format code using one of the existing codes as a starting point. Custom number formats use format codes that describe how you want to display a number, date, time, or text. For example, to display 12 as 00012, use this code: 00000. To display .631 as 0.6, use this code: 0.#.



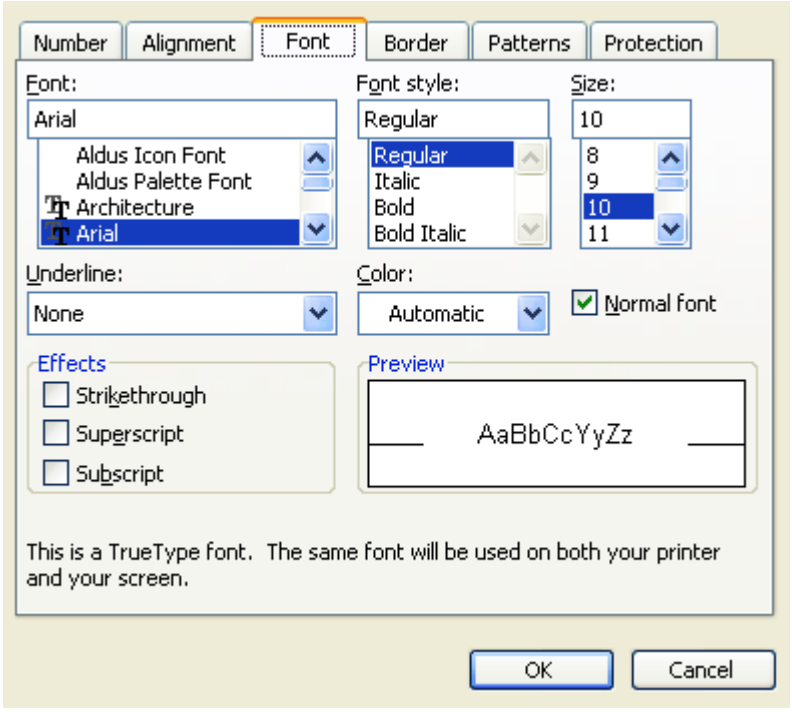
Text Alignment

The second tab of the FORMAT CELLS dialog is the ALIGNMENT tab. In the ALIGNMENT panel, you see the following sections:

Text Alignment
Under HORIZONTAL, you have these choices: General, Left (Indent). You can set the indent. Center, Right, Fill, Justify, Center Across Selection.
Under VERTICAL, you have these choices: Top, Center, Bottom, Justify.

Orientation
You can orient text by degrees.

Text Control
In the TEXT CONTROL section, you can wrap text in a cell, shrink to fit, or merge cells.

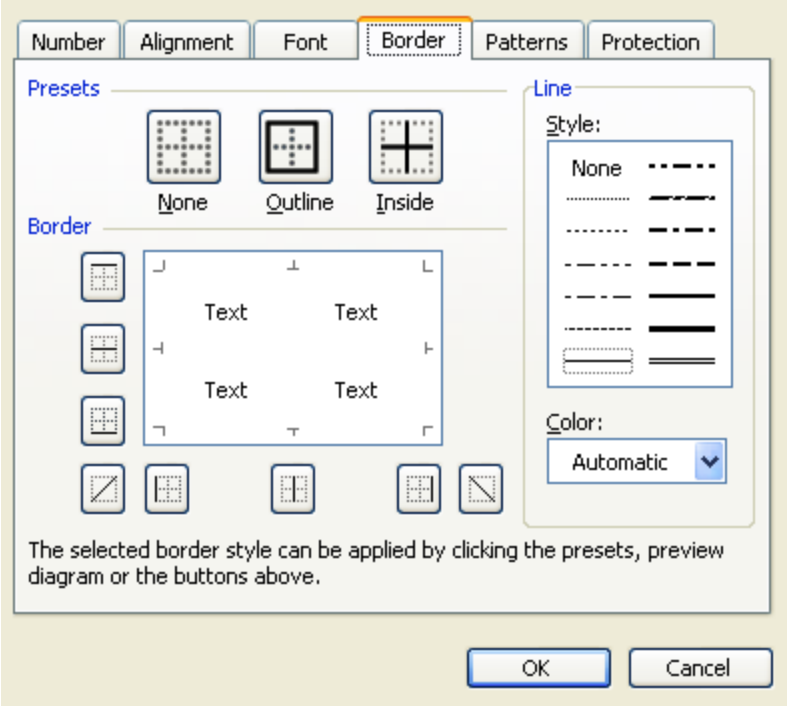


Font

The FORMAT CELLS dialog FONT tab displays a panel that allows you to choose the FONT, FONT STYLE, FONT SIZE, UNDERLINE, COLOR, and EFFECTS (strikethrough, Superscript, or Subscript). The Formatting toolbar provides most of these features except for the EFFECTS.

Border

The Border tab on the Format Cells dialog opens the Border panel (pictured at right). It consists of the following three sections:



Presets
In this section, there are three buttons, None, Outline, and Inside. Choosing one of these presets, places no border around the selected cell, an outline border in the line style that has been selected under Line, or inside borders between cells in the line style that has been selected in the Style box under Line.

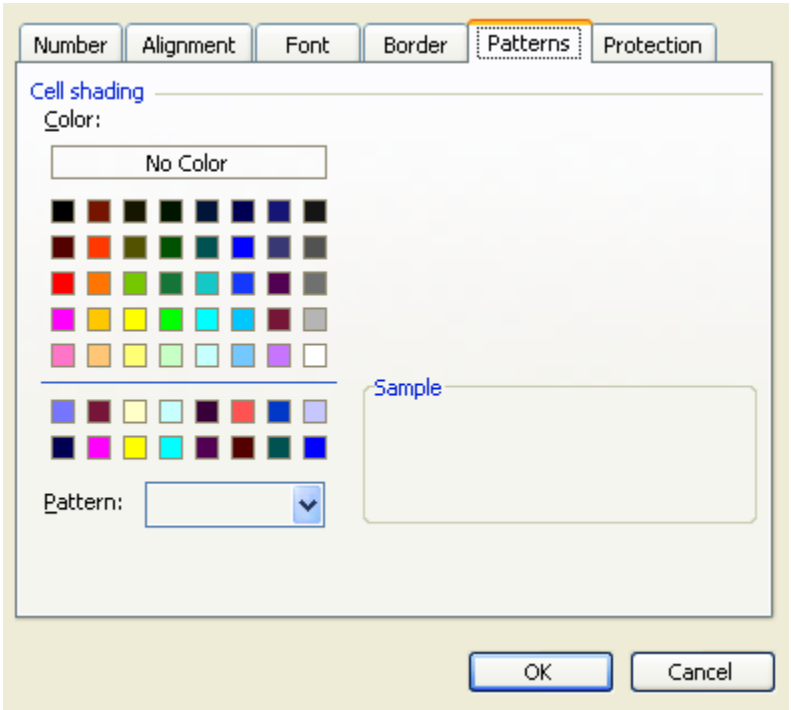
Line
In this section, in the Style box, you can select None for no border, or a variety of line styles.

In the Color list, you can scroll down the list and select the color you want. The color you select here applies to the line style selected and used as a border.

Border
In this section, you have the choice of 8 buttons to use to select a border style.

To check out an option, simply click on it and see how that choice affects the cells in the Border section of this dialog.

If you want to undo your selection(s), click None in the Presets section. When you are satisfied with the combination of the selected preset, border selection, border line style and/or color, click the OK button.



Patterns

The Patterns tab on the Format Cells dialog opens the Patterns panel, pictured here.

Cell Shading
Under Cell Shading, you see two choices: Color and Pattern

You can choose to have no color, or you can click on a color sample to use to shade the current cell or a selected range of cells.

Clicking on the Down Arrow at the right of the Pattern box pops up a panel containing a variety of patters you can use to shade the current cell or a range of selected cells. You can use a combination of a pattern and a color.

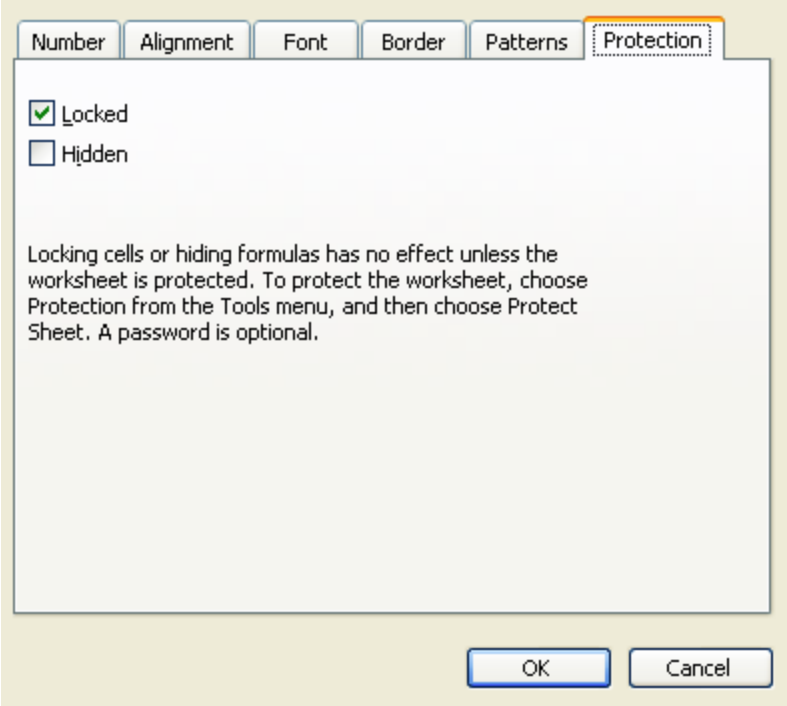
Note that you see a sample of your selection in the Sample rectangle. Be sure to have good contrast between the cell background and the type. When you are satisfied with your selections, click the OK button.

You can use this same format category to create a background for your worksheet as follows:

1. Press Ctrl+A to select the entire worksheet.
2. Choose Cells from the Format menu.
3. Choose the Pattern tab.
4. Select the color and/or pattern for the background.
5. Click OK.
6. You can undo this background by immediately pressing Ctrl+Z.

Protection

If you do not want others to modify the workbook you have created except for a section of it, select the cells that you want to allow others to be able to change, and follow these steps:



1. On the Format menu, select Cells.
2. Choose the Protection tab. The Protection panel is shown here.
3. Make sure there is no check mark in the Locked box. If so, click to unmark it.
4. Click on the OK button.
5. From the Tools menu, choose Protection.
6. Choose Protect Sheet from the submenu that appears.
7. Type in a password (this is optional) and click OK.
8. Confirm the password and click OK.

Note: Do not forget this password. Be sure to write it down and keep it somewhere safe.

To remove protection from the worksheet:

1. Drop down the Tools menu.
2. Point to Protection.
3. Click Unprotect sheet.
4. If prompted, enter the password assigned when the worksheet was protected. Remember that the password is case sensitive. If you lose your password, you will not be able to use the file.

Shortcut keys for moving and scrolling in a worksheet

Press	To
Arrow keys	Move one cell up, down, left, or right
Ctrl+Arrow key	Move to the edge of the current data region
Home	Move to the beginning of the row
Ctrl+Home	Move to the beginning of the worksheet
Ctrl+End	Move to the last cell on the worksheet, which is the cell at the intersection of the right-most used column and the bottom-most used row (in the lower right corner)
Page Down	Move down one screen
Page Up	Move up one screen
Alt+Page Down	Move one screen to the right
Alt+Page Up	Move one screen to the left
Ctrl+Page Down	Move to the next sheet in the workbook
Ctrl+Page Up	Move to the previous sheet in the workbook
Ctrl+Backspace	Scroll to display the active cell
F5	Display the **Go To** dialog box
Shift+F5	Display the **Find** dialog box
Shift+F4	Repeat the last **Find** action (same as **Find Next**)
Tab	Move between unlocked cells on a protected worksheet