

cell address for you , Excel 2000 enters the cell's address for you . Immediately after typing the cell address for you , Excel 2000 returns your cursor to the formula so that you can complete it.

After you assign a name to a cell, you don't have to remember that cell's address when you use that cell in formulas. Suppose that you are creating a large worksheet that spans many screens . If you assign names to cells when you create them, cells that you know that name is made easier. Instead of locating that cell to find its address, you need only to type the name when entering a formula that uses that cell.

10.4 Types of References

Relative Versus Absolute References

The first time you move or copy a formula, you might be surprised to see that Excel automatically changes some cell references in your formula. Is this a bug? Not at all; it's an example of how Excel formulas help you build powerful worksheets without a lot of typing.

By default, cell and range references within a formula use relative addresses . Although Excel stores the exact location of the cells to which the formula refers, it also takes careful note of where those cells are located in relation to the cell that contains the formula. When you copy or move that formula, Excel automatically adjusts cell references to reflect their position relative to the new location.

Let's say you have a column of numbers in cells B1 through B20 and you've created a formula in B21 that totals cells. =SUM (B1:B20). If you copy that formula to cell C21, Excel assumes you want to total the numbers in column C, so it adjusts the formula accordingly, to =SUM (C1:C20). If you move a formula three rows down and five columns to the right, Excel adds three to each row number and counts five letters higher in the alphabet for each cell or range address in the new formula. Thus, a reference to D5 changes to I8.

What happens when you store a scrap of crucial information, like the current interest rate, in one particular cell? You want all formulas on your worksheet to use the value entered in that cell whenever they make an interest related calculation,. If you use relative references, every time you move or copy a

formula that refers to this cell, the reference points to the wrong address. The solution? Use an absolute address to tell Excel not to adjust the reference when you move or copy a formula.

To specify an absolute address, use dollar signs within the cell address. When you type \$A\$4 as part of a formula, for example, Excel looks for the value in cell A4 even if you move the original formula or copy it to another location.

You can mix and match relative and absolute addresses in a formula, or even in the same address. For example, \$A4 tells Excel to leave the column address at A when you move or copy the formula, but adjust the row address relative to the new location.

10.5 Working with Formulas

Using Functions

Designing the basic row-and column structure of your worksheet and entering data are only the first steps. To really take advantage of Excel's number-crunching capability, you can create formulas that help you analyze and summarize all that data. Excel formulas let you perform simple arithmetic, complex calculations, and logical tests. Better, yet they allow you to update the underlying numbers or create alternative scenarios, instantaneously recalculating the results without tedious retyping.

When you enter text or numbers in a cell, Excel assumes you're entering a value (sometimes referred to as a constant). The program displays values exactly as you type them adjusting the display only if the cell includes any formatting settings. When the first character you type is an equal sign, however, Excel knows you're entering a formula. Excel stores the formula in the cell, but it displays the result of the formula. When you type =950-21, you're telling Excel, "Subtract 21 from 950 and show the result in the cell." If you select the cell, you see the formula itself displayed in the formula bar, where you can click to edit.

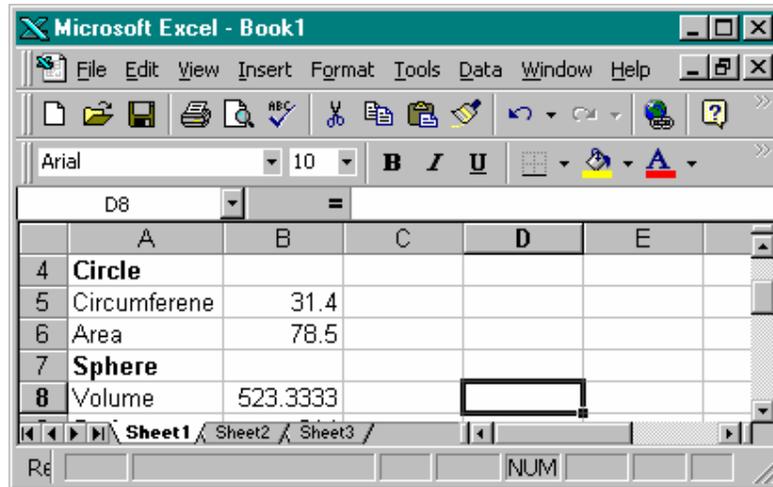


Fig This Excel is used Formulas..

When you see a cell that begins with the number sign (#), that's Excel's way of telling you that it cannot calculate a result for your formula. You may see any of seven possible error codes. To remove the error message and display the results you expect, you have to fix the problem

Either by editing the formula or changing the contents of a cell to which the formula refers.

Using Functions to Create More Powerful Formulas

Asking Excel to do only simple addition or multiplication is like hiring a Harvard MBA to balance your checkbook. Yes, you can and will use simple Excel formulas to add columns of numbers, but its biggest asset is its repertoire of mathematical, financial, statistical, and logical functions. Excel 2000 can crunch numbers using more than 200 functions, from simple averages to complex trigonometric formulas.

What You Can Do with Functions

You can find hundreds of predefined functions in Excel, including esoteric ones designed for financial analysts and statisticians. The following table includes a sampling of the most commonly used functions to see the complete list, use the Formula Palette, described later in this chapter.

Commonly Used Functions

Function	What it Does	Examples
Sum)number1, Number 2....	Calculates the total Of all the values In parentheses	SUM (C4:C24) Displays the total of all the C24. numbers in cells Average C4through
(number 1, number 2...)	Calculates the average of a group of values.	AVERAGE (C4:C24) Displays the average of all the numbers in cells C4 through C24,ignoring blank cells.
COUNT (value 1, Counts the number of cell Value 2...)	that contain numeric values	COUNT (C4:C24) If ever cell in this range Contains a value, the result, Will be 21.
MAX (number1, Find the highest and lowest Number 2..) and value within the list. MIN (number 1 Number 2....)		MAX (C4:C24) Displays the highest numeric value in the list, ignoring text labels and Blank cells.
MONTH (serial1 Displays only the month or Number) and week	day of the week for a given	WEEKDAY(9/29/2005) Sunday =1,Monday=2
Day (serial 1- number) Excel you type a date, Excel automatically converts it to a serial number		and so on ,apply Custom format Dddd to a cell, and you see this date falls on a Saturday.
PROPER (text) Capitalizes you type just And UPPER(text) the first letters or all text Respectively.		PROPER("MACMILLAN") computer publishing") Chan- ges the first letter of each word To a capital letter in this case Macmillan computer Publishing.
ROUND (number, off to a given Num digits) number of digits.		ROUND (3.1415926,2) Rounds to two decimal Places, or 3.14.
TODAY	Displays today's	DATEVALUE