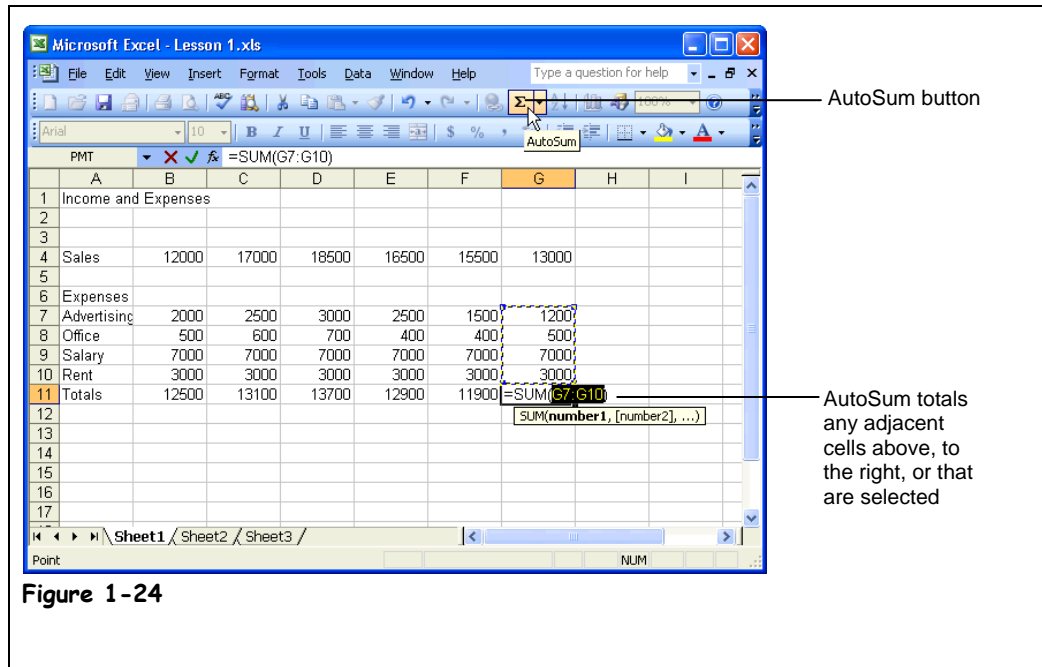


## Lesson 1-14: Calculating Value Totals with AutoSum

**Figure 1-24**

Use the AutoSum function to find the column totals.



**Figure 1-24**

This lesson introduces what spreadsheet programs are really all about: formulas. A *formula* performs calculations, such as adding, subtracting, and multiplying. Formulas are actually a type of value, like the numerical values you worked with in the previous lesson. Unlike the values in the previous lesson that contained only numbers, formulas contain information to perform a numerical calculation, such as adding, subtracting, multiplying, or even finding an average. A cell with the formula `=5+3` will display the result of the calculation: 8.

All formulas in Excel must begin with an equal sign (=).

All formulas must start with an equal sign (=). The equal sign tells Excel you want to perform a calculation. Once you have entered an equal sign, you must specify two more types of information: the values you want to calculate and the arithmetic operator(s) or function name(s) you want to use to calculate the values. Formulas can contain explicit values, such as the numbers 5 or 8, but more often will reference the values contained in other cells. For example, the formula `=A5+A6` would add together whatever values were in the cells A5 and A6. You're already familiar with some of the arithmetic operators used in Excel formulas: they include math symbols such as the plus sign (+) to perform addition between values and the minus sign (-) to perform subtraction. *Functions* are used in formulas to perform calculations that are more complicated. For example, the SUM function adds together a range of cells, and the PMT function calculates the loan payments based on an interest rate, the length of the loan, and the principal amount of the loan. In this lesson, you will learn how to use one of the most commonly used functions in Excel, the SUM function, which finds the total of a block of cells.

Formulas may sound terribly confusing, but they are usually not much more difficult to work with than a calculator.

**1. Click cell B11 to make it the active cell.**

This is where you want to enter a formula to total the expenses in B column. The easiest way to add together several number values in a cell range is to use the AutoSum button. The AutoSum button inserts the SUM function (which adds all the values in a range of cells) and selects the range of cells Excel thinks you want totaled.

**2. Click the AutoSum button on the Standard toolbar.**

Excel enters =SUM(B7:B10) in cell B11. Notice that the cells included in the formula range—B7, B8, B9, and B10—are surrounded by what looks like a line of marching ants. The AutoSum function is quite good at guessing which cells you want to total, but sometimes you will want to modify the cell selection. In our case, AutoSum has correctly selected the cells.

**NOTE:** Excel is usually smart enough to determine which cells you want to total, however if the suggested range is incorrect, select the range you want using the technique you learned in the previous lesson and press <Enter>.

**3. Click the Enter button on the Formula bar.**

Excel instantly calculates the totals of the values in the cell range B7:B10 and displays the result, 11700, in the cell. Look at the formula bar—notice the formula =SUM(B7:B10), appears instead of the result of the calculation.

**4. Click cell B7, enter 2000, and press <Enter>.**

You've just made two very important discoveries! The first is that entering data in a cell replaces or overwrites whatever information was currently there. The second discovery is what is more relevant to this lesson: look at cell B11, where you just entered the SUM formula. Cell B11 now reads 12500—it has automatically recalculated the total for the cell range. Go ahead and find the total for the expenses in the C column.

**5. Click cell C11, click the AutoSum button, and press <Enter>.**

Excel totals the expenses in the C column. Finish entering totals for the remaining expense columns.

**6. Repeat Step 5 and enter SUM formulas for the remaining columns (D through G).**

Compare your worksheet with the one in Figure 1-24 when you're finished.



**AutoSum button**

Expenses			
Advertising	1200	2500	30
Office	500	600	7
Salary	7000	7000	70
Rent	3000	3000	30
Totals	=SUM(B7:B10)		

**Finding the Total of a Cell Range**



**Enter button**

 =SUM(B7:B10)

**Formula bar**

 **Quick Reference**

To Use the AutoSum Function to Find the Totals of a Cell Range:

1. Click the cell where you want to insert the total.
2. Click the **AutoSum button** on the Standard toolbar.
3. Verify the cell range selected by AutoSum is correct. If it isn't select the cell range you want to total.
4. Complete the formula by pressing <Enter>.