What makes Excel so powerful, and maybe even exciting, is its ability to bring something to the worksheet that wasn’t there before. Taking a column of sales figures and finding their average or determining the highest score on a test—automatically—is really what Excel is about. If all you’re doing is entering names and values on the worksheet without doing something to that information, you’re probably using the wrong application—sort of a souped-up Word, only with cells instead of paragraphs. Learning how to compose your own Excel formulas and use Excel’s built-in calculations, called functions, allow you to use some of Excel’s real potential.

And you’ll see that formulas tie into ranges—because your formulas often work with many cells at the same time (e.g., for computing sums, averages, and many other mathematical operations).

Of course, this is a mighty big subject, and learning all the things Excel can do in this area would require a book a whole lot larger—and more expensive—than you’d be prepared to pay for. What we’re going to do here introduce the essentials—the things you have to know in order to get your money’s worth—both from this book and from Excel.

**Automatic Calculations with Functions**

We’ll start with functions and see how to carry out all sorts of calculations on your data.
Adding a Column of Numbers

So let’s cut to the chase. Say you need to add that column of numbers—the classic Excel task.

1. In cells H3:H7, enter the values shown in Figure 4–1.

![Figure 4–1. It will all add up: The numbers we want to add.](image)

**NOTE:** Don’t get the wrong idea—the actual values we’ve entered don’t particularly matter, and more importantly the *number* of values populating in the column doesn’t really matter either. The procedure for adding 50,000 values in a column works the same way as adding just 5.

2. Next, click in cell H8, click the Home tab, and choose AutoSum from the Editing button group (see Figure 4–2).

![Figure 4–2. The Editing button group](image)

You should now see what’s shown in Figure 4–3.

![Figure 4–3. In summation: We’re about to add all those numbers.](image)