Don't Panic!
You Can Quickly Learn
Microsoft Excel

eBook by
David F. Stephan
&
David M. Levine

Afraid that Excel is too complicated?
If you can interpret this:

$$4$$
$$\underline{+3}$$
$$7$$

You know enough to understand how to use Microsoft Excel!

(If you cannot interpret the above, how did you ever get into the school in which you are taking a business statistics course?!)

Let's get started (it's only four short lessons).

Lesson 1: What You See Is Not Necessarily There!

Microsoft Excel is based on one trick.
To illustrate this trick, open a note-taking or word processing app and type the following:

=4+3

What do you see?

=4+3

No surprise! What you see is what you typed. Now open Excel and go to any of the rectangular boxes (they are called *cells*) and type:

=4+3

(In Excel 2013, press the Escape key to see the cells if they are not onscreen when you open Excel)
What do you see?

What's "there," in the cell, is a *formula.* And notice that what you see is not the formula, but something else! Now, again, if you can interpret

$$\begin{array}{r} 4 \\ +3 \\ \hline 7 \end{array}$$

you can understand that =4+3 specifies a calculation that Excel performs, the result of which Excel displays in the cell where you had typed the formula.

That's basically the trick that Microsoft Excel uses. Now, that you know the trick, you can learn how to use Excel to assist you in calculations.

Lesson 2: It's More Than a Calculator!

While you could use Excel to enter formulas such as =4+3, you'd do better using a calculator for such simple calculations.

Excel *excels* when you have to deal with tables of values. Consider this table:

Sheets & Towels Home Stores Quarterly Sales ($thousands) by Division					
	QUARTER				
DIVISION	First Qtr.	Second Qtr.	Third Qtr.	Fourth Qtr.	Total by Region
Northeast	100	110	70	150	430
Southeast	200	185	150	280	815
Northwest	300	270	230	395	1195
Southwest	400	380	300	590	1670
Total by Quarter	1000	945	750	1415	4110

There are eight sums in this table: the four quarterly totals and the four regional totals. The first quarter total is:

$$100$$
$$200$$
$$300$$
$$\underline{+400}$$
$$1000$$

You could hand sum each total and then type this table into a word processing document. But if you did that, and one of the sales values was updated later, you would need to recalculate one of the quarterly and one of the regional totals.

For example, changing the Northeast's first quarter sales to 150 would change the first quarter and Northeast totals:

DIVISION	QUARTER				
	First Qtr.	Second Qtr.	Third Qtr.	Fourth Qtr.	Total by Region
Northeast	150	110	70	150	480
Southeast	200	185	150	280	815
Northwest	300	270	230	395	1195
Southwest	400	380	300	590	1670
Total by Quarter	1050	945	750	1415	4160

As sales values change in subsequent years, you would need to recalculate all eight sums. Is there a way you could avoid the need for all of these recalculations?

As you may have guessed, the answer is "Yes, use Excel."

We could begin by typing formulas that look like this:

=100+200+300+400

But when one of the sales values changes, we would need to change that value *and* the formula as well—doubling our editing work!

Can we write the formula in such a way that the second edit would be unnecessary?

Lesson 3: Cell References Help You Make Full Use of Formulas

Let's enter the same sales table in Excel.

	A	B	C	D	E	F
1	Sheets & Towels Home Stores Quarterly Sales ($thousands) by Division					
2						
3		QUARTER				
4	DIVISION	First Qtr.	Second Qtr.	Third Qtr.	Fourth Qtr.	Total by Region
5	Northeast	100	110	70	150	430
6	Southeast	200	185	150	280	815
7	Northwest	300	270	230	395	1195
8	Southwest	400	380	300	590	1670
9	Total by Quarter	1000	945	750	1415	4110

In Excel, instead of writing

=100+200+300+400

as the formula for the first quarter total, we can (and should) write:

=B5+B6+B7+B8

The four entries B5, B6, B7, and B8 are examples of *cell references.* You can translate this formula as "take the value in cell B5 and to it, add the value in cell B6, add the value in cell B7, and add the value in cell B8 and display the result."

What is/where is B5, B6, B7, and B8? Look on the edge of the worksheet. Note that columns are labeled with letters, rows with numbers. "B5" refers to the cell that in column B and row 5. "B8" refers to the cell that is in column B and row 8. In other words, *cell references* refer to specific cells in Excel.

Lesson 4: The Two Best Shortcuts: Cell Ranges and Functions

At this point, you've already learned the basics of what Excel does and how to use Excel! Now, as the final lesson in this eBook, let's learn about two shortcuts that will greatly simplify things for you.

Imagine if the Sheets & Towels Home Stores had twelve divisions and not just four. If we extended the table in Lesson 3, the formula for the first quarter total would be:

=B5+B6+B7+B8+B9+B10+B11+B12+B13+B14

That's a lot of B's! And a lot of typing. Is there a way to minimize typing? Yes, by using the short cuts *cell ranges* and *functions*.

A cell range is a shortcut way of referring to a group of cells. The cell range B5:B14 would refer to cells B5 through B14, inclusive, the cells used in the total formula on the prior page.

A function is a short cut way of performing a calculation. Most functions uses values in a cell or cell range as the basis for their calculation. For example, the SUM function totals the values in a group of cell. We could combine this function with the cell range B5:B14 to create the formula

=SUM(B5:B14)

that would calculate the same total as

=B5+B6+B7+B8+B9+B10+B11+B12+B13+B14

Which one would you rather enter into Excel?!!!

Congratulations! You did not *panic*, did you? And now you are ready to continue with your business statistics textbook!

Extra Credit Question

Are you a student who likes to earn extra credit? Then answer the following question:

What formula should you enter as the grand total that appears in cell F9 of the table shown in Lesson 3 on page 8?

We should note that getting this question correct will *not* improve your business statistics course grade, but will help you win friends, influence people, and enhance your self-esteem (we exaggerate).

Extra Credit Question Answer

Cell F9 could contain either of the following two formulas:

=SUM(F5:F9)

or

=SUM(B9:E9)

You can see which one we choose by opening the attached Excel worksheet file, selecting cell F9, and looking in the formula bar.

If you don't know what a "formula bar" is, you should immediately download and read the "Basic Computing Skills" PDF file that is available on the webpage for your business statistics textbook.