101 Ready-to-Use Excel® Formulas

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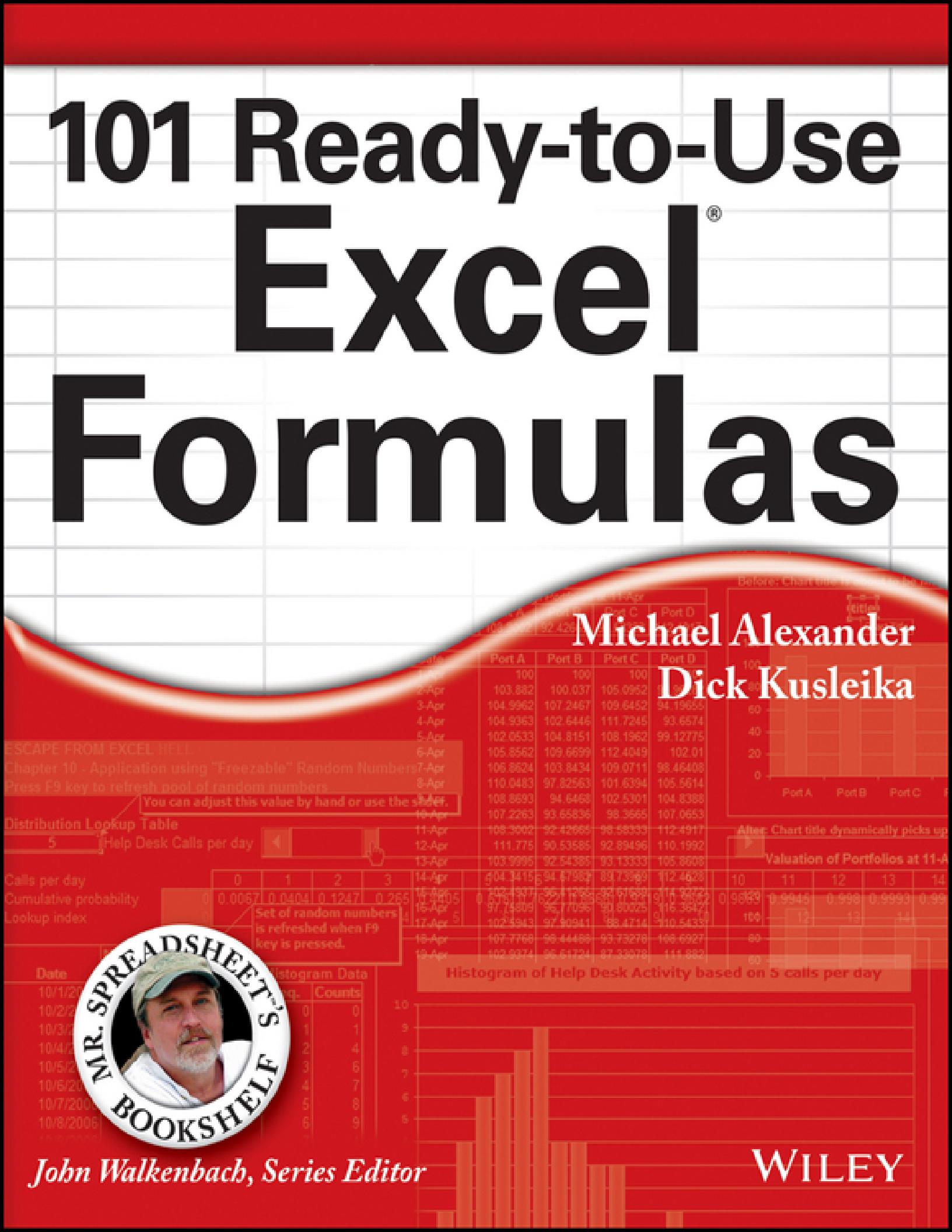

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by Michael Alexander and Dick Kusleika

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101 Ready-to-Use Excel Formulas

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About the Authors

Introduction

Formulas are the true engines of Excel. Employing various Excel functions, formulas enable Excel analysts to create aggregated reporting, complex calculation engines, clever dashboard models, and much more. Indeed, Excel analysts become more productive as their proficiency with Excel functions and formulas improves.

But building proficiency with Excel functions and formulas takes time. Given that Excel contains more than 400 functions, you could spend months, even years, learning which functions are best for certain tasks and which functions can be combined with others functions.

Unfortunately, many analysts don't have the luxury of taking a few weeks' time-out to learn all they need to know about Excel functions and formulas. The scenarios and issues they face require solutions now.

This is where *101 Ready-to-Use Excel Formulas* comes in. This book approaches Excel formulas with the assumption that "learning" comes with accomplishing core tasks. Instead of offering the usual general overview of Excel formula writing, this book provides 101 of the most commonly used, real-world Excel formulas.

For each formula covered, we outline a common problem that needs to be solved and provide the actual Excel formula to solve the problem, along with detailed explanations of how the formula works. This approach lets you use this book as a handy reference for finding a formula that solves a common problem.

After reading about a given formula, you should be able to

- Immediately implement the needed Excel formula

- Understand how the formula works
- Reuse the formula in other workbooks

What You Need to Know

To get the most out of this book, you need to have established certain skills before diving in. The ideal candidate for this book has experience working with data in Excel along with familiarity with the basic concepts of data analysis such as working with tables, aggregating data, performing calculations, and creating charts.

What You Need to Have

You need the following to be able to download and use the examples highlighted in this book:

- A licensed copy of Excel 2010 or Excel 2013
- An Internet connection in order to download the sample files

How This Book Is Organized

We've grouped this book into nine chapters that are chock-full of tips, techniques, and formulas dedicated to a particular topic.

Chapter 1: Introducing Excel Formulas

Chapter 1 serves as an introduction to Excel formulas, giving you an understanding of how Excel formulas work and some of the ground rules for working with formulas.

Chapter 2: Common Mathematical Operations

In Chapter 2, you gain insight into some of the fundamental mathematical operations every Excel analyst should know. The formulas found here serve as the foundation for all kinds of advanced data analysis.

Chapter 3: Manipulating Text with Formulas

Chapter 3 focuses on the transformation and shaping of text strings. In this chapter, you explore some of the common text transformation exercises an Excel analyst performs, and in the process, you get a feel for many of the text-based functions Excel has to offer.

Chapter 4: Working with Dates and Times

Chapter 4 gives you a solid understanding of how Excel handles time-based data. Through the prism of the most

commonly used date formulas, you discover how to more effectively utilize the dates and times within your data sets.

Chapter 5: Performing Conditional Analysis

In Chapter 5, you take a look at a wide array of conditional analysis formulas that add flexibility to your analytical processes. With the formulas found here, you'll be able to save time, organize your analytical processes, and enhance your data-crunching power.

Chapter 6: Using Lookup Formulas

Chapter 6 focuses on Excel's powerful, sometimes intimidating, Lookup formula. The formulas demonstrated in this chapter provide the foundation you need to add depth and power to your Excel data models.

Chapter 7: Common Business and Financial Formulas

Chapter 7 demonstrates a host of business and financial formulas that leverage Excel's flexible spreadsheet environment to create key business and financial metrics used in virtually every industry.

Chapter 8: Common Statistical Analysis

Chapter 8 takes you beyond simple mathematical operation and into the realm of statistical analysis. With the help of the formulas found here, you quickly get up to speed on fundamental statistical concepts, even if you've never taken a course in statistics.

Chapter 9: Using Formulas with Conditional Formatting

Chapter 9 rounds out the book's 101 formulas with a look at how you can leverage formulas to enhance conditional formatting. Here, you take in a few examples of how integrating your own custom formulas can help add a visual layer to your data analysis.

Conventions in This Book

We present menu command sequences in this book by using an arrow (⇒) between commands. For example, File⇒Open means go to the File menu, click it, and select Open on the list that appears.

Formulas usually appear on a separate line in monospace font, like so:

```
=AVERAGE(A1:A3)
```

Excel function names appear in uppercase and other formula elements are all lowercase. Text that we tell you to type appears in *bold*.

What the icons mean

We use Tip icons to indicate a pointer that you should file away for future reference. Tips usually make your life easier.

The Note icon indicates something that you should pay special attention to.

This icon refers you to related or additional material found in the book.

We use Caution icons to flag an issue that can cause you trouble.

About the Sample Files

Each chapter in this book has an associated sample file with a separate tab for each formula outlined in this book. These sample files give you the ability to see the formula working, as well as the ability to copy the formula for your own use elsewhere.

You can download the sample files from the Wiley website at the following URL:

www.wiley.com/go/101excelformula

Chapter 1: Introducing Excel Formulas

Microsoft Excel is, at its core, a calculation engine. Like a calculator, it accepts a question (such as 2+2) and gives you an answer. When you're working with a calculator, these questions are called mathematical operations. In Excel, you call these formulas.

Excel allows you to use formulas to perform not only mathematical operations but also a myriad of other complex actions, such as parsing textual values, searching for certain values in a range of data, performing recursive calculations, and much more.

To leverage the full power of Excel formulas, you need to understand how Excel formulas work as well as some of the ground rules for working with formulas. The goal of this chapter, therefore, is for you to get acquainted with the fundamentals of using Excel formulas.

Feel free to skip over this chapter if you already have a solid understanding of formula mechanics and want to get right into real-world examples, which start in Chapter 2.

You can download the files for all the formulas at www.wiley.com/go/101excelformula.

Creating and Editing Excel Formulas