Head First Excel

Wouldn't it be dreamy if there was a book on Excel that could turn me into an expert while keeping me engaged and entertained? But it's probably just a fantasy....

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Table of Contents (Summary)

Intro
1 Introduction to formulas: Excel's real power xxv
2 Visual design: Spreadsheets as art 1
3 References: Point in the right direction 29
4 Change your point of view: Sort, zoom, and filter 59
5 Data types: Make Excel value your values 89
6 Dates and times: Stay on time 117
7 Finding functions: Mine Excel's features on your own 141
8 Formula auditing: Visualize your formulas 169
9 Charts: Graph your data 197
10 What if analysis: Alternate realities 227
11 Text functions: Letters as data 251
12 Pivot tables: Hardcore grouping 279
13 Booleans: TRUE and FALSE 309
14 Segmentation: Slice and dice 331
i Leftovers: The Top Ten Things (we didn't cover) 357
ii Install Excel's Solver: The Solver 383

Table of Contents (the real thing)

Intro

Your brain on Excel. Here you are trying to learn something, while here your brain is doing you a favor by making sure the learning doesn't stick. Your brain's thinking, "Better leave room for more important things, like which wild animals to avoid and whether naked snowboarding is a bad idea." So how do you trick your brain into thinking that your life depends on knowing spreadsheets?

Who is this book for? xxvi
We know what you're thinking xxvii
Metacognition xxix
Here's what YOU can do to bend your brain into submission xxxi
Read Me xxxii
The technical review team xxxiv
Acknowledgments xxxv
Introduction to formulas

Excel's real power

We all use Excel to keep lists.

And when it comes to lists, Excel does a great job. But the real Excel ninjas are people who have mastered the world of formulas. Using data well is all about executing the calculations that will tell you what you need to know, and formulas do those calculations, molding your data into something useful and illuminating. If you know your formulas, you can really make your numbers sing.

Can you live it up on the last night of your vacation? 2
Here's what you budgeted and what you spent 3
Excel is great for keeping records... 4
Formulas work with your data 5
References keep your formulas working even if your data changes 11
Check your formulas carefully 14
Refer to a bunch of cells using a range 15
Use SUM to add the elements in a range 15
When you copy and paste a formula, the references shift 21
Excel formulas let you drill deep into your data 26
Everyone has plenty of cash left for a food-filled night in New York City! 27
visual design

Spreadsheets as art

Most people usually use Excel for page layout.
A lot of formula-writing masters, who are familiar with just how powerful Excel can be, are shocked that people "just" use the software for showing information with a grid. But Excel, especially in its more recent versions, has become quite handy as a page layout tool. You're about to get comfortable with some important and not-so-obvious Excel tools for serious visual design.

- CRM Freak needs to present their financials to analysts
- The dollar sign is part of your cell's formatting
- How to format your data
- The boss approves!
- Design principle: keep it simple
- Clash of the design titans...
- Use fonts to draw the eye to what is most important
- Cell styles keep formatting consistent for elements that repeat
- With your cell styles selected, use Themes to change your look
- He likes it, but there's something else...
- Use proximity and alignment to group like things together
- Your spreadsheet is a hit!
Point in the right direction

A formula is only as good as its references. No matter how creative and brilliant your formula is, it won't do you much good if it does not point to the correct data. It's easy to get references right for short, individual formulas, but once those formulas get long and need to be copied, the chance of reference mistakes increases dramatically. In this chapter, you'll exploit absolute and relative references as well as Excel's advanced new structured reference feature, ensuring that no matter how big and numerous your references are, your formulas will stay tight and accurate.

MIN returns the lowest number in a series 64
Let Excel fill in ranges by starting your formula and using your mouse 67
Excel got the right answer using a more sophisticated reference 68
Use absolute references to prevent shifting on copy/paste 73
Absolute references give you a lot of options 75
Named ranges simplify your formulas 76
Excel's Tables make your references quick and easy 82
Structured references are a different dimension of absolute reference 83
Your profitability forecasts proved accurate 88
change your point of view

Sort, zoom, and filter

The details of your data are tantalizing.

But only if you know how to look at them. In this chapter, you'll forget about formatting and functions and just focus on how to change your perspective on your data. When you are exploring your data, looking for issues to investigate, the sort, zoom, and filter tools offer surprising versatility to help you get a grip on what your data contains.

Political consultants need help decoding their fundraising database 90
Find the names of the big contributors 91
Sort changes the order of rows in your data 92
Sorting shows you different perspectives on a large data set 95
See a lot more of your data with Zoom 103
Your client is impressed! 106
Filters hide data you don’t want to see 107
Use Filter drop boxes to tell Excel how to filter your data 108
An unexpected note from the Main Campaign… 109
The Main Campaign is delighted with your work 112
Donations are pouring in! 115
data types

Make Excel value your values

Excel doesn’t always show you what it’s thinking.

Sometimes, Excel will show you a number but think of it as text. Or it might show you some text that it sees as a number. Excel will even show you data that is neither number nor text! In this chapter, you’re going to learn how to see data the way Excel sees it, no matter how it’s displayed. Not only will this knowledge give you greater control over your data (and fewer “What the #$% is going on?” experiences), but it will also help you unlock the whole universe of formulas.

Your doctor friend is on a deadline and has broken data 118
Somehow your average formula divided by zero 121
Data in Excel can be text or numbers 122
The doctor has had this problem before 125
You need a function that tells Excel to treat your text as a value 126
A grad student also ran some stats...and there’s a problem 132
Errors are a special data type 135
Now you’re a published scientist 140
Dates and times

Stay on time

Dates and times in Excel are hard.

Unless you understand how Excel represents them internally. All of us at one point or another have had to do calculations involving these types of figures, and this chapter will give you the keys to figuring out how many days, months, years, and even seconds there are between two dates. The simple truth is that dates and times are a really special case of the data types and formatting that you already know. Once you master a couple of basic concepts, you'll be able to use Excel to manage scheduling flawlessly.

Do you have time to amp up your training for the Massachusetts Marathon? 142

VALUE() returns a number on dates stored as text 146

Excel sees dates as integers 147

Subtracting one date from another tells you the number of days between the two dates 148

When subtracting dates, watch your formatting 152

Looks like you don’t have time to complete training before a 10K 153

Coach has a better idea 154

DATEDIF() will calculate time between dates using a variety of measures 156

Coach is happy to have you in her class 161

Excel represents time as decimal numbers from 0 to 1 162

Coach has an Excel challenge for you 165

You qualified for the Massachusetts Marathon 167
Finding Functions

Mine Excel's Features on Your Own

Excel has more functions than you will ever use.

Over many years and many versions, the program has accumulated specialized functions that are terribly important to the small group of people who use them. That's not a problem for you. But what is a problem for you is the group of functions that you don't know but that are useful in your work. Which functions are we talking about? Only you can know for sure, and you're about to learn some tips and techniques to finding quickly the formulas you need to get your work done efficiently.

Should you rent additional parking? 170
You need a plan to find more functions 173
Excel's help screens are loaded with tips and tricks 174
Here's the convention center's ticket database for the next month 178
Anatomy of a function reference 183
The Dataville Convention Center COO checks in... 185
Functions are organized by data type and discipline 186
Your spreadsheet shows ticket counts summarized for each date 192
Box tickets for you! 195
Excel formulas can get really complicated.

And that is the point, right? If all you wanted to do was simple calculation, you’d be fine with a paper, pen, and calculator. But those complicated formulas can get unwieldy—especially ones written by other people, which can be almost impossible to decipher if you don’t know what they were thinking. In this chapter, you’ll learn to use a simple but powerful graphical feature of Excel called formula auditing, which will dramatically illustrate the flow of data throughout the models in your spreadsheet.
Graph your data

Who wants to look at numbers all the time?

Very often a nice graphic is a more engaging way to present data. And sometimes you have so much data that you actually can’t see it all without a nice graphic. Excel has extensive charting facilities, and if you just know where to click, you’ll unlock the power to make charts and graphs to display your data with drama and lucidity.

Head First Investments needs charts for its investment report 228
Create charts using the Insert tab 231
Use the Design and Layout tabs to rework your chart 232
Your pie chart isn’t going over well with the corporate graphic artist 236
You’re starting to get tight on time… 247
Your report was a big success… 249
what if analysis

Alternate realities

Things could go many different ways.

There are all sorts of *quantitative factors* that can affect how your business will work, how your finances will fare, how your schedule will manage, and so forth. Excel excels at helping you model and manage all your *projections*, evaluating how changes in those factors will affect the variables you care about most. In this chapter, you’ll learn about three key features—*scenarios*, *Goal Seek*, and *Solver*—that are designed to make assessing all your "what ifs" a breeze.

Should your friend Betty advertise? 252
Betty has projections of best and worst cases for different ad configurations 255
Scenarios helps you keep track of different inputs to the same model 258
Scenarios saves different configurations of the elements that change 259
Betty wants to know her breakeven 261
Goal Seek optimizes a value by trying a bunch of different candidate values 262
Betty needs you to add complexity to the model 266
Solver can handle much more complex optimization problems 267
Do a sanity check on your Solver model 272
Solver calculated your projections 276
Betty's best-case scenario came to pass... 277
text functions

Letters as data

Excel loves your numbers, but it can also handle your text.

It contains a suite of functions designed to enable you to manipulate text data. There are many applications to these functions, but one that all data people must deal with is what to do with messy data. A lot of times, you’ll receive data that isn’t at all in the format you need it to be in—it might come out of a strange database, for example. Text functions shine at letting you pull elements out of messy data so that you can make analytic use of it, as you’re about to find out....

Your database of analytic customers just crashed!
Here’s the data
Text to Columns uses a delimiter to split up your data
Text to Columns doesn’t work in all cases
Excel has a suite of functions for dealing with text
LEFT and RIGHT are basic text extraction functions
You need to vary the values that go into the second argument
Business is starting to suffer for lack of customer data
This spreadsheet is starting to get large!
FIND returns a number specifying the position of text
Text to Columns sees your formulas, not their results
Paste Special lets you paste with options
Looks like time’s running out...
Your data crisis is solved!

=\text{FIND}("x", "Head First Excel")
pivot tables

Hardcore grouping

Pivot tables are among Excel's most powerful features. But what are they? And why should we care? For Excel newbies, pivot tables can also be among Excel's most intimidating features. But their purpose is quite simple: to group data quickly so that you can analyze it. And as you're about to see, grouping and summarizing data using pivot tables is much faster than creating the same groupings using formulas alone. By the time you finish this chapter, you'll be slicing and dicing your data in Excel faster than you'd ever thought possible.
13 boolens

TRUE and FALSE

There's a deceptively simple data type available in Excel. They're called **Boolean values**, and they're just plain ol' TRUE and FALSE. You might think that they are too basic and elementary to be useful in serious data analysis, but nothing could be further from the truth. In this chapter, you'll plug Boolean values into **logical formulas** to do a variety of tasks, from cleaning up data to making whole new data points.

- Are fishermen behaving on Lake Datville? 332
- You have data on catch amounts for each boat 333
- Boolean expressions return a result of TRUE or FALSE 334
- IF gives results based on a Boolean condition 334
- Your IF formulas need to accommodate the complete naming scheme 336
- Summarize how many boats fall into each category 343
- COUNTIFS is like COUNTIF, only way more powerful 346
- When working with complex conditions, break your formula apart into columns 350
- Justice for fishies! 356
segmentation

**Slice and dice**

Get creative with your tools.

You've developed a formidable knowledge of Excel in the past 13 chapters, and by now you know (or know how to find) most of the tools that fit your data problems. But what if your problems *don't fit those tools*? What if you don't even have the data you need all in one place, or your data is divided into categories that don't fit your analytical objectives? In this final chapter, you'll use *lookup functions* along with some of the tools you already know to slice new *segments* out of your data and get really creative with Excel's tools.

You are with a watchdog that needs to tally budget money

Here's the graph they want

Here's the federal spending data, broken out by county

Sometimes the data you get isn't enough

Your problems with region are bigger

Here's a lookup key

VLOOKUP will cross-reference the two data sources

Create segments to feed the right data into your analysis

Geopolitical Grunts would like a little more nuance

You've enabled Geopolitical Grunts to follow the money trail...

Leaving town...

It's been great having you here in Dataville!
leftovers

The Top Ten Things (we didn’t cover)

You’ve come a long way.

But Excel is a complicated program, and there’s so much left to learn. In this appendix, we’ll go over 10 items that there wasn’t enough room to cover in this book, but should be high on your list of topics to learn about next.

#1: Data analysis 384
#2: The format painter 385
#3: The Data Analysis ToolPak 386
#4: Array formulas 386
#5: Shapes and SmartArt 387
#6: Controlling recalculation and performance tuning 388
#7: Connecting to the Web 389
#8: Working with external data sources 389
#9: Collaboration 390
#10: Visual Basic for Applications 390

install excel’s solver

The Solver

Some of the best features of Excel aren’t installed by default.

That’s right, in order to run the optimization from Chapter 10, you need to activate the Solver, an add-in that is included in Excel by default but not activated without your initiative.

Install Solver in Excel 392