This free e-Book will teach you Excel 2019 for Mac in five hours.

We've helped over 2 million students to learn Excel. If you carefully work through this free book there is absolutely no doubt that you **will** master Excel 2019 for Mac fundamentals.

Make sure you are using the correct version of this free e-book. A free e-book is available for all commonly used Excel versions.

We continuously update our free and published books based upon user feedback so that the latest version has no known errors. You can download the most recent version of this free e-book from: https://thesmartmethod.com. This book is only for *Excel 2019 (or 365) for Apple Mac*. We also produce a version of this free e-book for Excel 2016 for Mac and for the Excel Windows versions: 2007, 2010, 2013, 2016, 2019 and 365. You can download any of these versions from: https://thesmartmethod.com.

Why you should use this free e-book

- **It is free (and you can print it).** Because this book is **free of charge**, schools, colleges, universities and businesses are able teach their students best-practice Excel skills without the substantial cost of designing lesson plans or purchasing books. If printed copies are needed you can print them yourself, or any copy shop can print books for you.

- **It is written entirely for the Apple Mac version of Excel 2019**. While this book covers the same material as our acclaimed *Excel 2019 for Windows* course, the book has been completely re-written for the (very different) Apple Mac version.

- **Smart Method® books are #1 best sellers.** Every paper printed Smart Method® Excel book (and there have been ten of them starting with Excel 2007) has been an Amazon #1 best seller in its category. This provides you with the confidence that you are using a best-of-breed resource to learn Excel.

- **Learning success is guaranteed.** For over fifteen years, Smart Method® courses have been used by large corporations, government departments and the armed forces to train their employees. This book has been constantly refined (during hundreds of classroom courses) by observing which skills students find difficult to understand and then developing simpler ways of explaining them. We have never had a student who has failed to learn Excel after taking one of our courses.

- **It is the book of choice for teachers.** As well as catering for those wishing to learn Excel by self-study, Smart Method® books have long been the preferred choice for Excel teachers as they are designed to teach Excel and not as reference books. Books follow best-practice adult teaching methodology with clearly defined objectives for each learning session and an exercise to confirm skills transfer. With single, self-contained lessons, the books cater for any teaching or self-learning period (from minutes to hours).

- **No previous exposure to Excel is assumed.** You will repeatedly hear the same criticism of most Excel books: "you have to already know Excel to understand the book". This book is different. If you've never seen Excel before, and your only computer skill is using a web browser, you'll have absolutely no problems working through the lessons.

- **It focuses upon the everyday Excel skills used in the workplace.** This free *Basic Skills* book will teach you the basics without confusing you with more advanced, less used, Excel features. If you decide to expand your Excel education, you'll be able to move on to other Smart Method® books (or e-books) in this series to master even the most advanced Excel features.

- **It provides a clearly defined route to become a true Excel guru.** If you later decide that you'd like to become a true Excel guru, we also have *Essential Skills* and *Expert Skills* books in this series that will teach you very advanced features that very few Excel users (even top professionals) really understand.

Learn Excel in just a few minutes each day (or in one five-hour sitting)

Excel is a huge and daunting application and you'll need to invest some time in learning the skills presented in this book. This will be time well spent as you'll have a hugely marketable skill for life. With 1.2 billion users worldwide, it is hard to imagine any non-manual occupation today that doesn't require Excel skills.

This book makes it easy to learn at your own pace because of its unique presentational style. The book contains 43 simple, self-contained lessons and each lesson only takes a few minutes to complete.

You can complete as many, or as few, lessons as you have the time and energy for each day. Many learners have developed Excel skills by setting aside just a few minutes each day to complete a single lesson. Others have worked through the entire book in less than five hours.

Hardly anybody understands how to use <u>every</u> Excel feature

It is important to realize that Excel is probably the largest and most complex software application ever created. Hardly anybody understands how to use *every* Excel feature, and, for almost all business users, large parts of Excel's functionality wouldn't even be useful.

Many learners make the fundamental error of trying to learn from an Excel reference book that attempts to document (though not teach) *everything* that Excel can do. Of course, no single book could ever actually do this. (There are some advanced Excel features that easily justify an entire book of their own).

This free *Basic Skills* book will teach you the fundamental Excel skills that are used every day, in offices all over the world. The book's objective is to teach the basics without confusing you by including more advanced, less used, Excel features.

By the end of this free **Basic Skills** book you'll be completely comfortable creating your own formulas using functions from Excel's vast function library. You'll also have mastered fundamental Excel skills such as *AutoSum, AutoFill* and *Formula Autocomplete.* You'll be confident in the knowledge that you are using Excel's features in the correct, best-practice, professional way and you'll feel really at home with Excel.

If you decide to expand your Excel education, you'll be able to use other books in this series to master even the most advanced Excel features.


If you'd like to review the precise skills taught in each book you can view the full course outlines for *Essential Skills* and *Expert Skills* at: https://thesmartmethod.com.

Excel competence levels

Office workers who use Excel every day for a living generally only use (and only need) a tiny fraction of Excel's enormous feature set.

Excel is a huge application with thousands of features. For most users it is a mistake to attempt to learn **every** Excel feature but, instead, to learn Excel to a competence level that is appropriate for your needs.
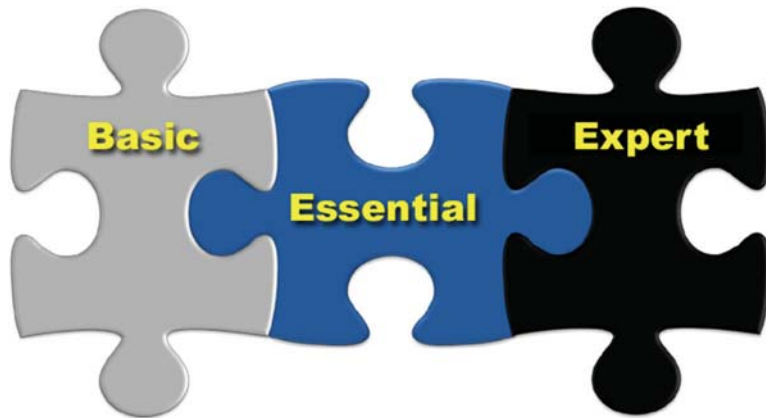
Basic Skills

This is where you will be at the end of this book. You'll feel really comfortable with Excel. Even at *Basic Skills* level you'll have mastered many skills that most untrained Excel users are unable to use correctly. You'll also be using the correct professional techniques rather than "muddling though" in the way that most self-taught Excel users do. You'll be able to create your own formulas using functions from Excel's vast function library and have a complete mastery of fundamental Excel features such as *AutoFill*.

Essential Skills

At this level you will have excellent Excel skills, good enough to impress any employer, and your Excel skills will be better than most office workers (even those with many years of experience). You'll be able to create beautifully laid-out worksheets that will really impress. You'll also have mastered many advanced features that few Excel users understand such as *absolute and relative cell references*, *visualizations*, *advanced charts*, *conditional formatting*, *date serial numbers*, *themes* and *cloud computing*. You can see a full list of the lessons in the *Essential Skills* course at our web site: https://TheSmartMethod.com.

Expert Skills

At *Essential Skills* level you'll be really, really good with Excel. If you want to join the tiny elite of power-users who can do absolutely everything with Excel you can move to expert level and become a true Excel guru.

This is a extremely high level of Excel competence that is very rarely found in the workplace (even amongst top professionals). Your Excel skills will be greater and broader than almost all other Excel users and you will understand (and be able to use) absolutely every Excel feature. You'll have a complete mastery of skills that are often even a mystery to Excel power users such as *Pivot Tables*, *what-if analysis, validations, solver, macros* and *slicers*. You can see a full list of the lessons in the *Expert Skills* course at our web site: https://TheSmartMethod.com.

Every lesson is presented on two facing pages

> Pray this day, on one side of one sheet of paper, explain how the Royal Navy is prepared to meet the coming conflict.
>
> *Winston Churchill, Letter to the Admiralty, Sep 1, 1939*

Winston Churchill was aware of the power of brevity. The discipline of condensing thoughts into one side of a single sheet of A4 paper resulted in the efficient transfer of information.

A tenet of our teaching system is that every lesson is presented on *two* facing sheets of A4. We've had to double Churchill's rule as they didn't have to contend with screenshots in 1939! If we can't teach an essential concept in two pages of A4 we know that the subject matter needs to be broken into two smaller lessons.

How this book avoids wasting your time

Over the years I have read many hundreds of computer text books and most of my time was wasted. The big problem with most books is that I must wade through thousands of words just to learn one important technique. If I don't read everything I might miss that one essential insight.

Many presentational methods have been used in this book to help you to avoid reading about things you already know how to do, or things that are of little interest to you.

Excel 2019 has many new features that won't be available to users of older Excel versions.
All of Excel 2019's new features are clearly documented.

Screenshots are provided in-line with the text when they can explain what you need to do more clearly than words alone.

If you want to progress through the course as quickly as possible you don't have to read notes.

Notes usually expand a little on the information given in the lesson text.

If you already know how to do something simply read the bold text for each step and just do it. Step notes sometimes provide precise instructions about how to progress if the one-line description is inadequate. Notes also often include interesting information about the current task.

When there is a sample file (or files) to accompany a lesson, the file name will be shown in a folder icon. You can download the sample file set from: https://TheSmartMethod.com

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Learn Excel 2019 for Mac OS X Expert Skills with The Smart Method

note

The IFS function is new in Excel 2019

IFS is a new function for Excel 2019, so it will not be available to users of earlier Excel versions.

You should avoid using IFS if your workbooks need to be accessible to users of earlier versions of Excel.

note

VLOOKUP is still (usually) a better solution than IFS

In: *Lesson 3-5: Use the IF logic function* (sidebar) I advised:

"Excel 2019 allows you to nest IF functions up to 64 levels deep (which is 63 too many)".

The new IFS and SWITCH functions (introduced in Excel 2019) are mainly intended to offer a simpler alternative to nested IF functions.

This doesn't mean using the IFS and SWITCH functions provides a better solution than VLOOKUP.

It is easy to introduce errors using IFS and SWITCH, as the order in which the logic pairs are listed is vital to the correct operation of the function.

In almost all business situations a VLOOKUP will provide a better and more elegant solution than the use of the IFS or SWITCH function.

Lesson 3-28: Use the IFS function

In: *Lesson 3-22: Use a VLOOKUP function for an exact lookup,* you used a VLOOKUP function to return a grade from different pass mark percentages.

Microsoft have added a new IFS function to Excel 2019. In this lesson you will solve exactly the same problem posed in: *Lesson 3-22: Use a VLOOKUP function for an exact lookup,* with a logic based (rather than lookup based) solution.

1 Open *IFS Grades-1* from your sample files folder.

	A	B	C	D	E	F
1	Exam Results					
2						
3	Name	Percentage	Grade		Percentage	Grade
4	Johnny Caine	70%			0%	Fail
5	George Marley	68%			60%	C
6	Betty Anan	86%			70%	B
7	Paris Winfrey	80%			80%	A
8	Ozzy Dickens	95%			90%	A*
9	Johnny Roberts	84%				

This is an exact duplicate of the *Grades-1* sample file that you used at the beginning of: *Lesson 3-22: Use a VLOOKUP function for an exact lookup.*

2 Use the IFS function to calculate the grade for each student by defining grade data within the function.

Sometimes it may be better to "hard code" data (such as the percentage grade thresholds) within the function itself. This prevents users from accidentally deleting or changing the grade percentage thresholds within the worksheet.

The argument against this approach is that the worksheet is more difficult to maintain if grade thresholds change in the future.

1. Click in cell C4.

2. Click: Formulas→Function Library→Logical→IFS.

The *Function Arguments* dialog for the IFS function appears.

The IFS function accepts up to 127 *Logical Test/Value* pairs.

3. Enter the following pair of arguments:

Logical_test1 = FALSE
B4<60%

Value_if_true1 = "Fail"
"Fail"

You will need to click the ⊞ button in the *Formula Builder* task pane to add the *Value_if_true1* argument.

IFS Grades-1

https://TheSmartMethod.com

Learning by participation

Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand.

Confucius, Chinese teacher, editor, politician and philosopher (551-479 BC)

Confucius would probably have agreed that the best way to teach IT skills is hands-on (actively) and not hands-off (passively). This is another of the principal tenets of The Smart Method® teaching method.

Research has backed up the assertion that you will learn more material, learn more quickly, and understand more of what you learn if you learn using active, rather than passive methods.

For this reason, pure theory pages are kept to an absolute minimum with most theory woven into the hands-on lessons, either within the text or in sidebars.

This echoes the teaching method used in Smart Method classroom courses where snippets of pertinent theory are woven into the lessons themselves so that interest and attention is maintained by hands-on involvement, but all necessary theory is still covered.

Whenever something can easily go wrong, or when the subject text is particularly important, you will see the *important* sidebar. You should always read important sidebars.

Each lesson models a real-world business problem. You'll immediately appreciate the value and relevance of each skill you learn.

A goal of this book is not to waste your time by explaining any skill twice. Sometimes you may forget something that has already been covered earlier in the course.

Cross-references are extensively used pointing you back to the lesson in which the relevant skills were learned. The cross-references also help when you use this course as a reference book but have forgotten the more basic skills needed to complete each step.

We encourage you to print this free book

E-books can only be obtained and downloaded from https://thesmartmethod.com (the publisher). Our e-books are published in full color as regular PDF files. This means that you can read them on just about any device without the bother of finding and installing reader software.

For classroom use we recommend that you print this book

Unlike most e-books, this one isn't locked to prevent printing (this is also true for all other Smart Method e-Books). While this book is useful for self-instruction, it is also ideal for teaching structured, objective-led, and highly effective classroom courses. Even though you can read this book on an iPad*, personal computer or e-Book reader, some students find it easier to use if you print it onto paper. You may legally print copies of this basic skills book (for yourself or your students) with only two conditions:

1. You must print the basic skills book exactly as it is published and may not add or remove any book content or copyright notices.

2. You may not make *any charge of any sort* for the basic skills books that you print. It is permissible, however, to give free copies of the book to students who attend a free (or paid for) class or course.

For classroom courses you can obtain a professional-looking result by printing on both sides of the paper. You can then punch the pages and place them into a binder. Make sure that odd pages appear on the right-hand side. This enables each two-page lesson to be viewed without turning the page.

For a professional touch you can also put a color insert onto the front cover (you'll find front and back cover images on our web site. Here's how the resulting binder will look:
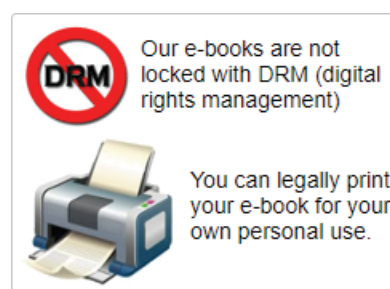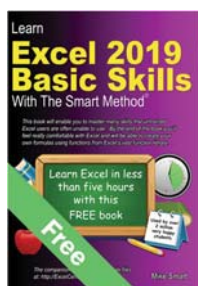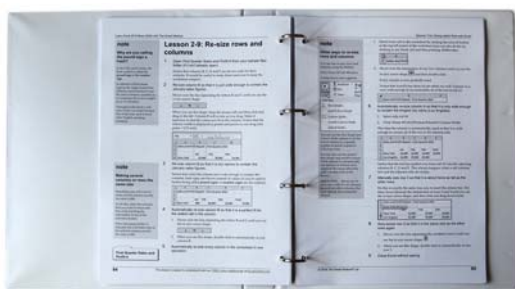
You can find full instructions for printing and binding this free e-book (along with the color front and back cover pages) at: https://thesmartmethod.com/printing-the-basic-skills-course.

You can obtain printed for under four dollars delivered free.

According to Lyra Research it costs between $0.05 and $0.08 cents per page to laser print a single black and white page. This means that it will cost between $6.00 and $9.60 to print this book yourself on a laser printer. If you need five or more books you can save a considerable amount of money by ordering perfect-bound paper printed books (with glossy color cover) from ourselves using our not-for-profit printing service. You can only order these not-for-profit books from: https://thesmartmethod.com/wholesale-printed-books. You can also order any *Smart Method* titles at wholesale prices from this page.

The Basic Skills paper books are often used as free giveaways by employment agencies (for job applicants who need Excel skills) by employers (to empower their employees with basic Excel skills at minimal cost) and by teachers who wish to teach their students basic Excel skills.

* If you are an iPad user you can add this e-book to your iBook library. The procedure for adding this e-book to your iBook library is detailed in a step-by-step guide at: https://thesmartmethod.com/how-to-save-and-view-a-pdf-e-book-on-an-ipad.

Learn Excel 2019 for Mac Basic Skills with The Smart Method

Mike Smart

Learn Excel 2019 for Mac Basic Skills with The Smart Method®

Contents

Introduction

Welcome to *Learn Excel 2019 for Mac Essential Skills with The Smart Method®*. This book has been designed to enable students to master Excel 2019 for Mac by self-study. The book is equally useful as courseware in order to deliver courses using The Smart Method® teaching system.

Feedback

At The Smart Method® we love feedback – both positive and negative. If you have any suggestions for improvements to future versions of this book, or if you find content or typographical errors, the author would always love to hear from you.

You can make suggestions for improvements to this book using the online form at:

https://thesmartmethod.com/contact

Future editions of this book will always incorporate your feedback so that there are never any known errors at time of publication.

If you have any difficulty understanding or completing a lesson, or if you feel that anything could have been more clearly explained, we'd also love to hear from you. We've made hundreds of detail improvements to our books based upon reader's feedback and continue to chase the impossible goal of 100% perfection.

Downloading the sample files

In order to use this book it is sometimes necessary to download free sample files from the Internet.

The process of downloading the free sample files is explained step-by-step in: *Lesson 1-7: Download the sample files and open/navigate a workbook*.

Problem resolution

If you encounter any problem using any aspect of this course, you can contact us using the online form at:

https://thesmartmethod.com/contact

We'll do everything possible to quickly resolve the problem.

The Excel version that was used to write this book
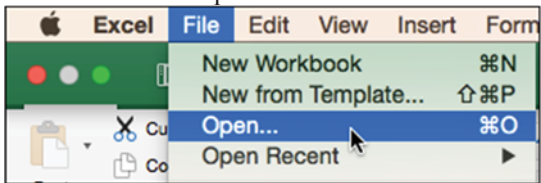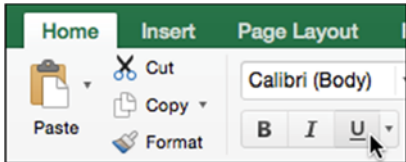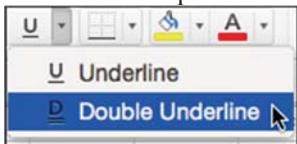
This book is written purely for *Excel 2019 for Mac.* You'll discover exactly which version your computer is running in: *Lesson 1-3: Check that your Excel version is up to date*. You can also use this book if you are using the subscription version of Excel 2019 for Mac (also known as Excel 365), but there may be some minor differences.

This edition was written using the *macOS (OS X) High Sierra (10.13)* operating system. Excel 2019 for Mac can also run under *Sierra (10.12)* and any future macOS version. If you're using a different version of macOS this book will be equally relevant, but you may notice small differences in the appearance of some of the screenshots in the book. This will only occur when describing an operating system (rather than an Excel) feature.

Users of earlier operating system versions should also consider updating their operating system to Sierra, as Apple offer a free update (or at least they did at the time of writing this book in January 2019).

Typographical Conventions Used In This Book

This guide consistently uses typographical conventions to differentiate parts of the text.

When you see this	Here's what it means
Click *Line Color* on the left-hand bar and then click *No line.*	Italics are used to refer to text that appears in a worksheet cell, an Excel dialog, on the Ribbon, or elsewhere within the Excel application. Italics may sometimes also be used for emphasis or distinction.
Click: ⌘→File→Open…	Move the cursor to the Menu Bar at the top of the screen. Click the File menu and click the Open… option from the drop-down list.
Click: Home→Underline.	Click on the Ribbon's *Home* tab and then click the *Underline* button (that's the left-hand side of the button, not the drop-down arrow next to it). Don't worry if this doesn't make sense yet. You will cover the Ribbon in depth in session one.
Click: Home→ Underline Drop Down→Double Underline.	Click on the Ribbon's *Home* tab and then look for the *Font* group. Click the drop-down arrow next to the Underline button (that's the right-hand side of the button) within this group and then choose *Double Underline* from the drop-down list.
Click: ⌘→Excel→Preferences→ Formulas and Lists→Custom Lists→ Import	This is a more involved example. 1. Move the cursor to the Menu Bar at the top of the screen. 2. Click the *Excel* menu and click *Preferences* from the dropdown list. The *Excel Preferences* dialog appears. 3. Find the *Formulas and Lists* group in the dialog and click the *Custom Lists* button. Another dialog pops up. 4. Click the *Import* button.
Type: **European Sales** into the cell.	Whenever you are supposed to actually type something on the keyboard it is shown in bold faced text.

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Press **<Cmd> + <Z>**.	You should hold down the **Cmd (⌘)** key and then press the **Z** key.
Σ AutoSum ▾	When a lesson tells you to click a button, an image of the relevant button will often be shown either in the page margin or within the text itself.
note In Excel 2019 there are a possible 16,585 columns and 1,048,476 rows. This is a great improvement on earlier versions.	If you want to read through the book as quickly as possible, you don't have to read notes. Notes usually expand a little on the information given in the lesson text.
important Do not click the *Delete* button at this point as to do so would erase the entire table.	Whenever something can easily go wrong, or when the subject text is particularly important, you will see the *important* sidebar. You should always read important sidebars.
tip **Moving between tabs using the keyboard** You can also use the **<Cmd>+<PgUp>** and **<Cmd>+<PgDn>** keyboard shortcuts to cycle through all of the tabs in your workbook.	Tips add to the lesson text by showing you shortcuts or time-saving techniques relevant to the lesson. The bold text at the top of the tip box enables you to establish whether the tip is appropriate to your needs without reading all of the text. In this example you may not be interested in keyboard shortcuts so do not need to read further.
anecdote I ran an Excel course for a small company in London a couple of years ago...	Sometimes I add an anecdote gathered over the years from my Excel classes or from other areas of life. If you simply want to learn Excel as quickly as possible you can ignore my anecdotes.
trivia The feature that Excel uses to help you out with function calls first made an appearance in Visual Basic 5 back in 1996 …	Sometimes I indulge myself by adding a little piece of trivia in the context of the skill being taught. Just like my anecdotes you can ignore these if you want to. They won't help you to learn Excel any better!
The World's Fastest Cars	When there is a sample file (or files) to accompany a lesson, the file name will be shown in a folder icon. You can download the sample file from: *https://TheSmartMethod.com.* Detailed instructions are given in: *Lesson 1-7: Download the sample files and open/navigate a workbook.*

How to use this course

This course utilizes some of the tried and tested techniques developed after teaching vast numbers of people to learn Excel during many years teaching Smart Method classroom courses.

In order to master Excel as quickly and efficiently as possible you should use the recommended learning method described below. If you do this there is absolutely no doubt that you will master the advanced Excel skills taught in this book.

Three important rules

#1 - Complete the course from beginning to end

It is always tempting to jump around the course completing lessons in a haphazard way.

We strongly suggest that you start at the beginning and complete lessons sequentially.

That's because each lesson builds upon skills learned in the previous lessons and one of our goals is not to waste your time by teaching the same skill twice. If you miss a skill by skipping a lesson you'll find the later lessons more difficult, or even impossible to follow. This, in turn, may demoralize you and make you abandon the course.

#2 If possible, complete a session in one sitting

The book is arranged into *sessions* and *lessons*.

You can complete as many, or as few, lessons as you have the time and energy for each day. Many learners have developed Excel skills by setting aside just a few minutes each day to complete a single lesson.

If it is possible, the most effective way to learn is to lock yourself away, switch off your telephone, and complete a full session, without interruption, except for a 15-minute break each hour. The memory process is associative, and we've ensured that the lessons in each session are very closely coupled (contextually) with the others. By learning the whole session in one sitting, you'll store all that information in the same part of your memory and will find it easier to recall later.

The experience of being able to remember all of the words of a song as soon as somebody has got you "started" with the first line is an example of the memory's associative system of data storage.

#3 Rest at least every hour

In our classroom courses we have often observed a phenomenon that we call "running into a wall". This happens when a student becomes overloaded with new information to the point that they can no longer follow the simplest instruction. If you find this happening to you, you've studied for too long without a rest.

You should take a 15-minute break every hour (or more often if you begin to feel overwhelmed) and spend it relaxing rather than catching up with your e-mails. Ideally you should relax by lying down and closing your eyes. This allows your brain to use all of its processing power to efficiently store and index the skills you've learned. We've found that this hugely improves retention of skills learned.

How to work through the lessons

At the end of each session, complete the session exercise

Keep attempting the exercise at the end of each session until you can complete it without having to refer to lessons in the session. Don't start the next session until you can complete the exercise from memory.

At the end of each session, review the objectives

The session objectives are stated at the beginning of each session.

Read each objective and ask yourself if you have truly mastered each skill. If you are not sure about any of the skills listed, revise the relevant lesson(s) before moving on to the next session.

You will find it very frustrating if you move to a new session before you have truly mastered the skills covered in the previous session. This may demoralize you and make you abandon the course.

How to best use the incremental sample files

Many lessons in this course use a sample file that is incrementally improved during each lesson. At the end of each lesson an interim version is always saved. For example, a sample file called Sales-1 may provide the starting point to a sequence of three lessons. After each lesson, interim versions called Sales-2, Sales-3 and Sales-4 are saved by the student.

A complete set of sample files (including all incremental versions) are provided in the sample file set. This provides three important benefits:

- If you have difficulty with a lesson it is useful to be able to study the completed workbook (at the end of the lesson) by opening the finished version of the lesson's workbook.

- When you have completed the book, you will want to use it as a reference. The sample files allow you to work through any single lesson in isolation, as the workbook's state at the beginning of each lesson is always available.

- When teaching a class one student may corrupt their workbook by a series of errors (or by their computer crashing). It is possible to quickly and easily move the class on to the next lesson by instructing the student to open the next sample file in the set (instead of progressing with their own corrupted file or copying a file from another student).

The time you spend learning Excel is hugely worthwhile

Excel is a huge and daunting application and you'll need to invest some time in learning the skills presented in this course. This will be time well spent as you'll have a hugely marketable skill for life. With 1.2 billion users worldwide, it is hard to imagine any organization of any size that does not value Excel skills.

If you persevere with this course there is no doubt that you will master Excel. A little time and effort is needed but the skills you'll acquire will be hugely valuable for the rest of your life.

Enjoy the course.

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1

Session One: Basic Skills

> A bad beginning makes a bad ending.
>
> *Euripides, Aegeus (484 BC - 406 BC).*

Even if you are a seasoned Excel user, I urge you to take Euripides' advice and complete this session. You'll fly through it if you already know most of the skills covered.

In my classes I often teach professionals who have used Excel for over ten years and they *always* get some nugget of fantastically useful information from this session.

In this session I teach you the absolute basics you need before you can start to do useful work with Excel 2019.

I don't assume that you have any previous exposure to Excel (in any version) so I have to include some very basic skills.

Session Objectives

By the end of this session you will be able to:

- Configure your mouse and understand right clicking
- Start Excel and open a new blank workbook
- Check that your Excel version is up to date
- Change the Office Theme
- Minimize, re-size, move and close the Excel window
- Understand Full Screen view
- Download the sample files and open/navigate a workbook
- Save a workbook to a local file
- Understand common file formats
- Pin a workbook and understand file organization
- View, move, add, rename, delete and navigate worksheet tabs
- Use the Ribbon
- Understand Ribbon components
- Customize the Quick Access Toolbar and preview the printout
- Understand views
- Hide and show the Formula Bar and Ribbon
- Use the help search system

Lesson 1-1: Configure your mouse and understand right clicking

If you're using your Mac with default settings and hardware, it's likely that your mouse appears to only have one button instead of two. This is great for simple programs, but makes it more difficult to use complex business applications like Excel.

It is possible to work with Excel using a single mouse button, but many features are much easier to use if you're able to 'right click' to access a contextual menu.

Even if your mouse only appears to have a single button, it's likely that it can be configured to recognize the difference between a 'left click' and 'right click'. Only very old mice truly only have one button (see sidebar if this is the case).

This lesson will show you how to enable two-button functionality on your mouse.

1   Test your mouse.

Move your mouse pointer down to any of the icons on the Dock at the bottom of the screen and click the right mouse button.

Even if your mouse only seems to have one button, click the mouse with your finger on the right side of the mouse.
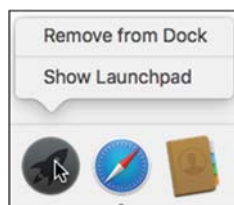
If a contextual menu appears as shown above, your mouse is already configured for right clicking and you don't need to do anything else. If no menu appears and a program opens instead, read on to learn how to enable right-clicking.

2   Open the System Preferences dialog.

If it hasn't been removed, you should see the System Preferences icon on the Dock at the bottom of the screen:

If you don't see this icon, you can access System Preferences by going to the Launchpad by either clicking its icon on the Dock or pressing the **<F4>** key.

Click the System Preferences icon.

The *System Preferences* dialog appears:

3   Open the Mouse settings dialog.

Click the *Mouse* icon in the *System Preferences* dialog (the 4th icon from the left on the second row).

The *Mouse* dialog appears:
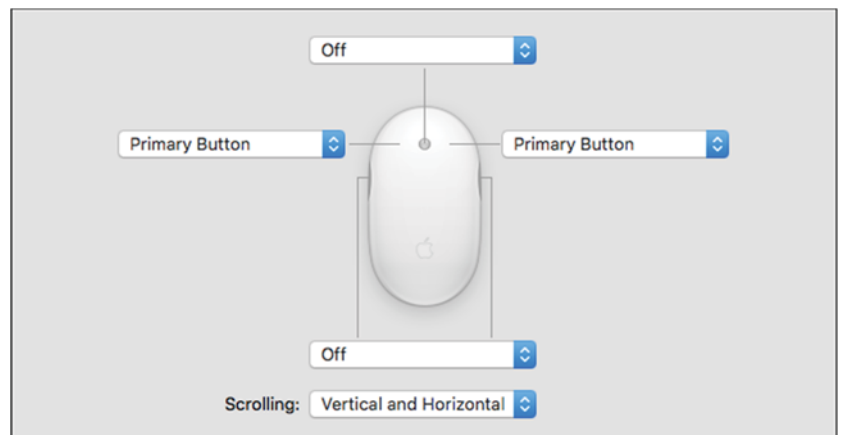
Note that this dialog may look different depending upon the type of mouse you are using.

4   Set the right mouse button to *Secondary Button*.

1.   Click the drop-down menu pointing to the right mouse button and click *Secondary Button* from the shortcut menu.
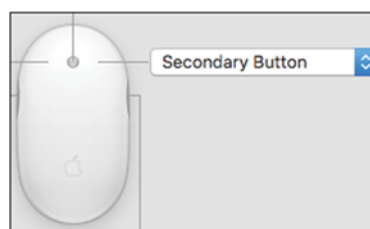
2.   Close the *Mouse* dialog by clicking the red *Close* button.

5   Test your mouse again.

Try right-clicking one of the Dock icons again. This time you should find that the contextual menu appears.

Lesson 1-2: Start Excel and open a new blank workbook

1   Move your mouse cursor to the bottom of the screen to display the Dock if it's not already visible.

2   Click the *Launchpad* icon on the Dock.

All of your installed applications are displayed, including *Microsoft Excel*.
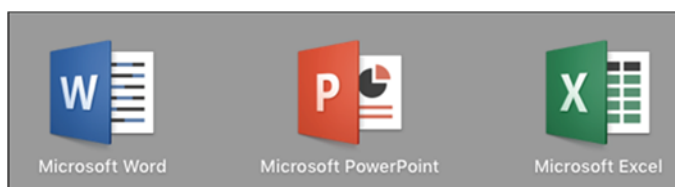
3   Add the *Microsoft Excel* icon to your Dock.

You'll be using Excel a lot, so it makes sense to add it to the Dock. This will make it appear at the bottom of the screen in future so you'll be able to start Excel with just one click.

To add Excel to the Dock, point to the *Microsoft Excel* icon in the list, then click and drag it down onto the Dock.

4   Click the *Microsoft Excel* icon to start Excel.

You can click the *Microsoft Excel* icon either from the Dock or from the Launchpad screen.

Excel starts and is displayed on the screen:
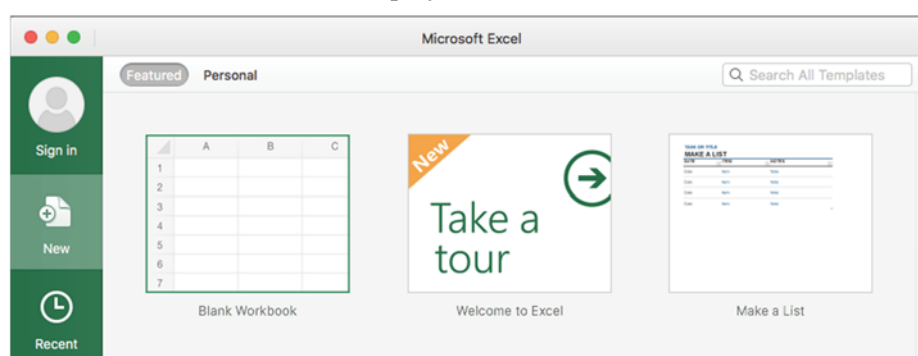
After you've started Excel 2019
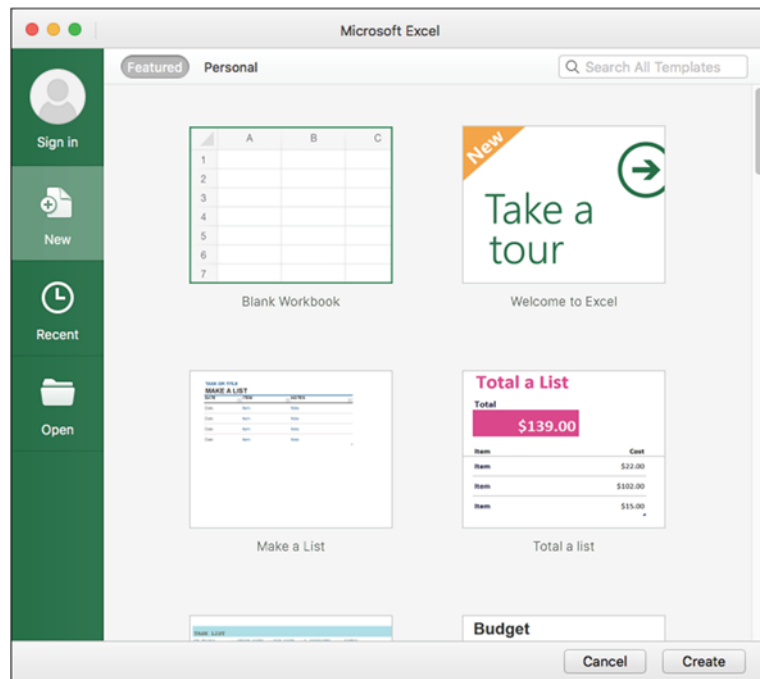
Now that Excel 2019 has started, it needs to know whether you want to create a new workbook, or whether you want to open a workbook that was created earlier.

When creating a new workbook, Excel also offers to give you a "flying start" by using a template. Templates are sample workbooks that you can adapt and modify for your own needs. The idea is very good but, in reality, templates are not usually a good choice as it can take longer to adapt them to your true needs than to design from scratch (see sidebar).

In this lesson you'll create a blank workbook.

1   Create a new blank workbook.

1.   Click the left mouse button on the *Blank Workbook* template.

2.   Click the *Create* button in the bottom-right corner.

Alternatively, you can double-click on the *Blank Workbook* template.

The Excel 2019 screen is displayed, showing a blank workbook:
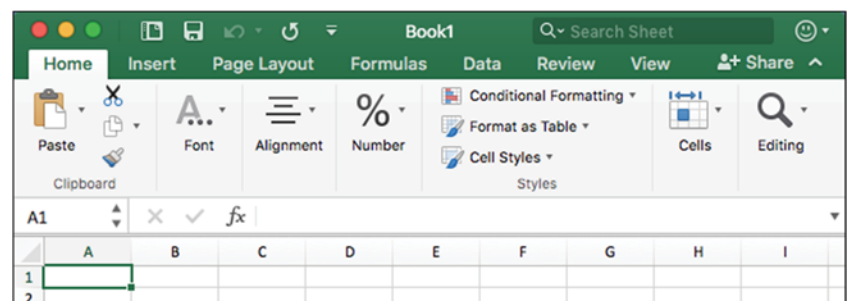
2   Leave the workbook open for the next lesson.

note

Office 365 and feature updates

There are now two ways of purchasing Excel – either as a one-off purchase or as part of a subscription service called Office 365.

You will receive monthly security and bugfix updates regardless of how you purchased Excel, but you will only receive new features if you have an Office 365 subscription.

The screenshots in this course show the most up-to-date version of Excel 2019, so some things may appear differently if you are using Excel 365 (the subscription version).

Lesson 1-3: Check that your Excel version is up to date

Automatic Updates

Normally Microsoft Office (including Excel) will look after updates without you having to do anything if Automatic Updates are enabled.

If you don't enable Automatic Updates, there is a danger that you may have an old, buggy, out of date version of Excel installed.

This lesson will show you how to enable Automatic Updates and make sure that you are using the latest (most complete, and most reliable) version of Excel 2019.

1   Start Excel and open a new blank workbook (if you have not already done this).

   You learned how to do this in: *Lesson 1-2: Start Excel and open a new blank workbook.*

2   Make sure that Automatic Updates are enabled.

   1.   If the Menu Bar isn't visible at the top of the screen, move the mouse cursor to the top of the screen to make it appear.

      You should see the following options:

      If you see a different set of options, it means the Excel window isn't selected. Make sure that the Excel window is selected either by clicking on it or by clicking the Microsoft Excel icon on the Dock.

   2.   Click: ☰→Help→Check for Updates.

      The Microsoft AutoUpdate dialog appears.

note

The Office Insider program

You might have noticed the tempting option to *Join the Office Insider program* in the *Microsoft AutoUpdate* dialog.

Joining the Office Insider program allows Microsoft to install updates on your computer that have not yet been fully tested. This means that you get early access to new features, but it also greatly increases the chances of encountering bugs in the untested early releases.

Microsoft offer two options for Office Insider: *Office Insider Slow* and *Office Insider Fast*.

The *Slow* option gives you early access to new updates that have already had some significant testing but are not yet considered ready for release.

The *Fast* option gives you significantly earlier updates, but with significantly more risk of encountering bugs and errors.

Joining the Office Insider program is not a good idea for most users. It is better to wait for the final versions that have been fully tested than to risk the potentially disastrous consequences of downloading untested updates.
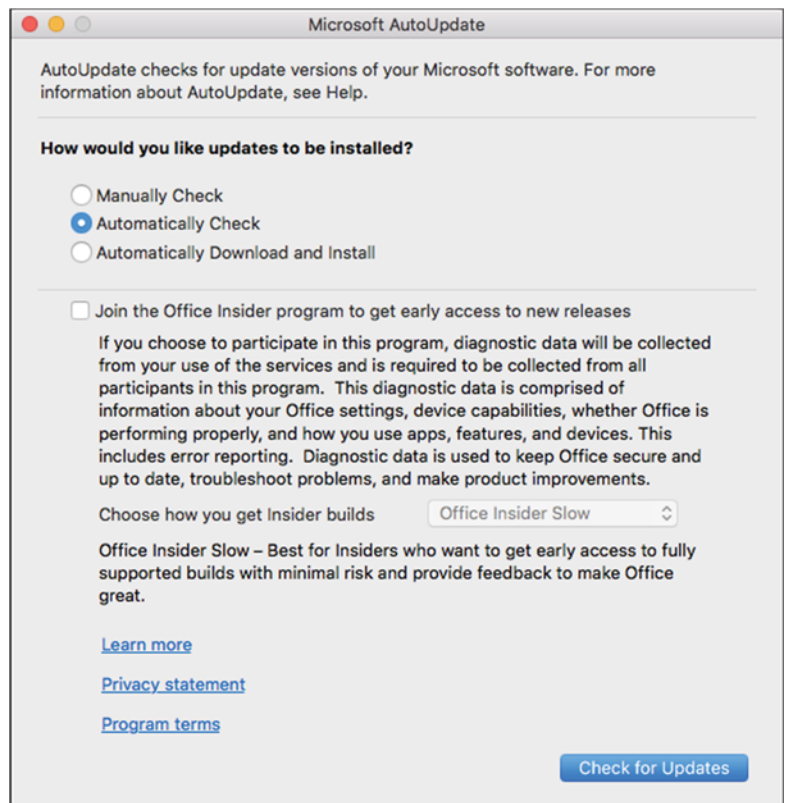
3. Make sure that *Automatically Check* is selected.

3   Check for updates and update to the latest version if necessary.

1. Click the *Check for Updates* button.

    You may be prompted to enter your password to confirm that updates should be allowed.

2. Install any updates that are available.

3. Click the red *Close* button [×] in the top-left corner of the *Microsoft AutoUpdate* window to close it.

4   Click the *Close* button [×] in the top-left corner of the Excel window to close Excel.

Lesson 1-4: Change the Office Theme

Excel 2019 allows you to change the colors of screen elements (such as the Menu Bar and Ribbon) by selecting one of two *themes*. The available themes are called *Colorful,* and *Classic*.

Colorful
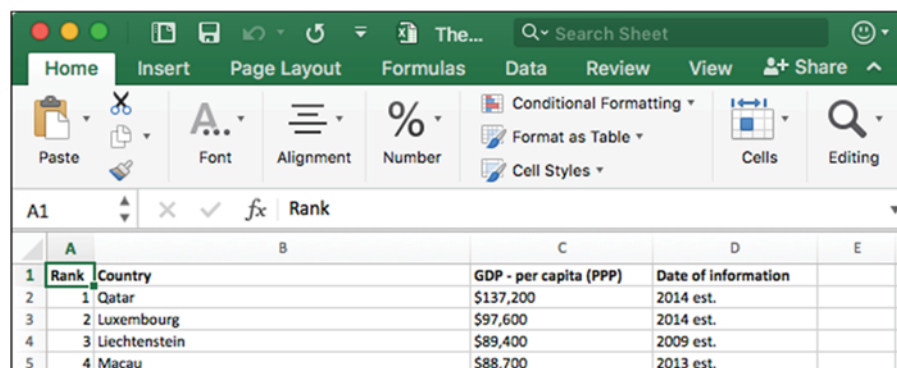
Excel 2019 uses the *Colorful* theme as the default. The Colorful theme makes it clear which of the Office applications you are using as Word, Excel, PowerPoint, Outlook and other Office applications each have their own unique color.

The previous version of Excel for the Mac (Excel 2011) didn't provide the option to change themes and was fixed to the *Classic* color scheme.

Classic
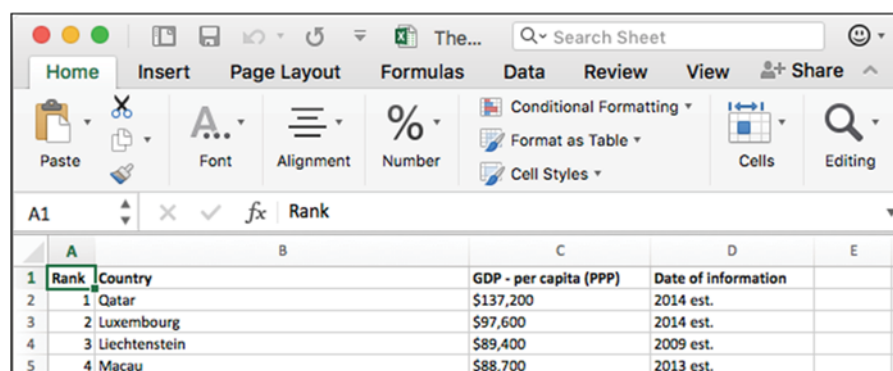
The *Classic* theme doesn't have the unique color scheme for each Office application and instead uses the gray color scheme that was used by Excel 2011 and earlier versions of Excel for the Mac.

1   Open Excel and open a new blank Excel workbook.

2   Change the *Office Theme.*

  1.   Click: →Excel→Preferences.
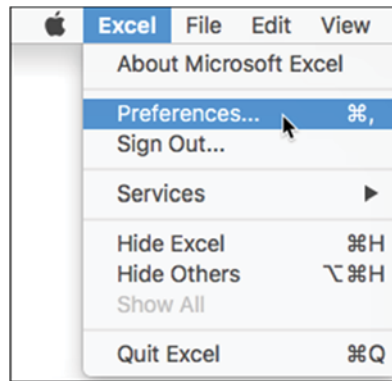
The *Excel Preferences* dialog appears.

2. Click *General* from the *Authoring* group.
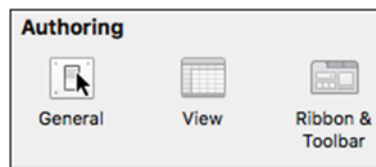
The dialog changes to show the *General* options.

3. In the *Personalize* group, click the *Office theme* dropdown menu and select *Classic*.
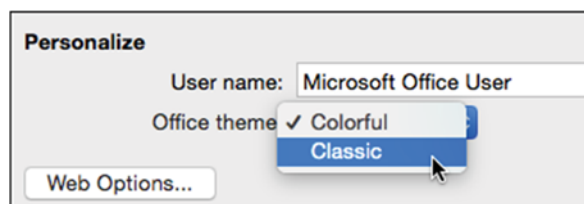
A dialog pops up to inform you that this change will affect all Office applications (see sidebar).

note

Themes affect every Office application

When you set a theme in Excel you are actually changing the theme for the entire Office 2019 application.

This means that you will have a consistent experience when using other Office applications such as *Word* and *PowerPoint*.
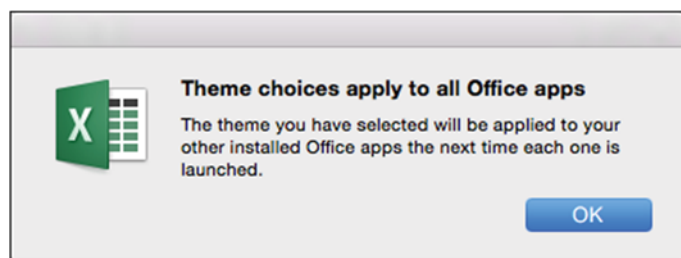
4. Click *OK* to close the dialog.

The color scheme changes immediately.

Experiment with each theme until you discover the one you prefer. All of the screenshots in this book were done using the *Colorful* theme. If you choose the *Classic* theme, the screenshots in the book may look slightly different to what you see on your computer screen.

3   Close Excel.

Lesson 1-5: Minimize, re-size, move and close the Excel window

The main Excel window has a dazzling array of buttons, switches and other artifacts. By the end of this book they will all make sense to you and you'll feel really comfortable with Excel.

For now, you'll explore the big picture by looking at how the Excel window can be sized and moved. The details will come later.

1   Open Excel.

2   Use the *Blank Workbook* template to open a new blank workbook.

   You learned how to do this in*: Lesson 1-2: Start Excel and open a new blank workbook.*

3   Understand the *Close, Minimize,* and *Zoom* buttons

   At the top left corner of the Excel window you can see three buttons.
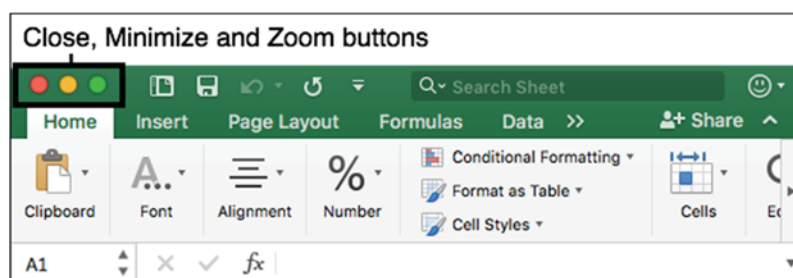
   These are the Close, Minimize and Zoom buttons:
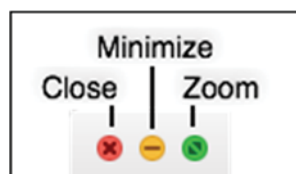
   Don't worry if they look like empty circles on your screen. The icons will appear when you move your mouse close to them.

   You'll learn more about the Zoom button and Full Screen view in the next lesson: *Lesson 1-6: Understand Full Screen view.*

4   Minimize and restore the Excel window

   Try clicking the *Minimize* button.

   Minimize reduces Excel to a button on right side of the Dock.

   Click this button again to restore the window to its previous size.

You can also restore the Excel window by clicking the Excel icon on the Dock (the same icon that you use to start Excel).
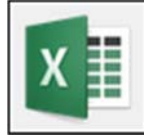
5   Re-size the Excel window.

Hover over either the side of the Excel window, or a corner of the window, with your mouse cursor. The cursor shape changes to a double-headed arrow.
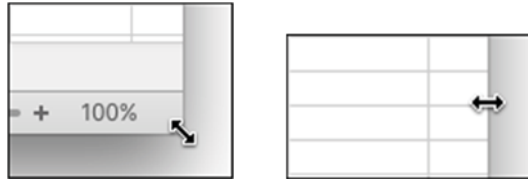
When you see either cursor shape, hold down the mouse button and move the mouse (this is called *click and drag*) to re-size the window.

Clicking and dragging a corner allows you to change both the height and width of the window.

Clicking an edge allows you to change only one dimension.

6   Move the Excel window.

Click and drag the *Title Bar* (the bar at the very top of the window) to move the Excel window around the screen.
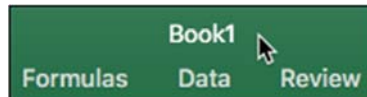
7   Close Excel.

Click on the *Close button* at the top left of the Excel window.

This is the most common way to close an Excel window.

There are also two lesser known (and lesser used) methods of closing Excel windows (see sidebar).

Note that, on the Mac, closing all Excel windows is not the same as quitting Excel (see sidebar for more on this).

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note

Other ways to close Excel

There are two other ways of closing an Excel window.

1. Click:

    →File→Close

2. Press the **<Cmd>+<W>** keys on your keyboard.

---

note

Closing Vs Quitting

Excel doesn't exit completely, even if you close every open Excel window. Instead, it stays running in the background so it can quickly reopen if it is needed again.

This usually isn't a problem, but large numbers of open programs can eventually cause your computer to run slowly.

To completely close Excel, click:

→Excel→Quit Excel

You can also do this by pressing the **<Cmd>+<Q>** keys on your keyboard or right-clicking on the Excel icon on the Dock and clicking *Quit* from the shortcut menu.

Lesson 1-6: Understand Full Screen view

You saw how to use the Minimize and Close buttons in the previous lesson, but you haven't yet used the Zoom button.
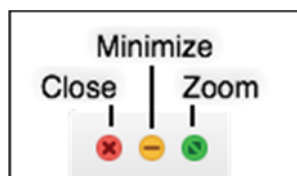
The Zoom button allows you to enter Full Screen view, which dedicates as much screen space as possible to the Excel window. You'll see how to use the Zoom button in this lesson.

1　Open Excel.

2　Use the *Blank Workbook* template to open a new blank workbook.

3　Enter Full Screen view.

Click the *Zoom* button to enter Full Screen view.

The Excel window expands to fill the entire screen.

4　Access the Dock and Menu Bar while in Full Screen view.

The first thing you may notice is that the Menu Bar has disappeared from the top of the screen and the Dock has disappeared from the bottom. They have been hidden so that as much screen space as possible can be dedicated to Excel, but they can still be accessed.

1.　Move the mouse cursor to the top of the screen.
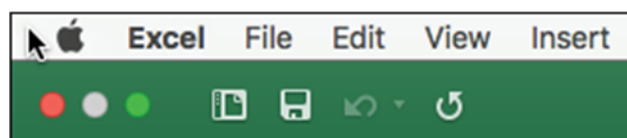
The Menu Bar appears, along with the *Close, Minimize* and *Zoom* buttons.

2.　Move the mouse cursor to the bottom of the screen.

The Dock appears.

5　Exit Full Screen view.

1.　Move the mouse cursor to the top of the screen to make the *Close*, *Minimize* and *Zoom* buttons appear.

note

If there is no Alt key on your keyboard

Before 2006, Apple keyboards used the *Option* key instead of the *Alt* key.

If you don't have an *Alt* key on your keyboard, use the *Option* key instead. It will work in exactly the same way.

Notice that the *Zoom* button has a different appearance while in Full Screen view.

2. Click the *Zoom* button once more to exit Full Screen view.

See sidebar for alternative ways to enter and exit Full Screen view.

6 Maximize the Excel window without entering Full Screen view.

Full Screen view is useful when you need as much screen space as possible, but it also makes it more difficult to access the Menu Bar and Dock, and can interfere with Excel's window management features.

Windows in Full Screen view can't be automatically rearranged by Excel, as you'll see in: *Lesson 2-2: Create a new workbook and view two workbooks at the same time*.

Fortunately, there's a solution that enables you to maximize a window without entering Full Screen view.

1. Move the mouse cursor to the Close, Minimize and Zoom buttons so that their icons appear.
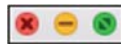
2. Hold down the **<Alt>** key (see sidebar if there is no **<Alt>** key on your keyboard).

   When you hold down the **<Alt>** key, the *Zoom* icon changes into a + symbol.

3. Keeping **<Alt>** held down, click the *Zoom* button.

   The window expands to fill the screen without entering Full Screen view.

   This method of maximizing the window doesn't allow Excel to fill as much screen space as Full Screen view, because it allows the Dock and Menu Bar to remain visible.

   Unless you have a very small screen, it's usually better to avoid Full Screen view. Keeping the Dock and Menu Bar visible makes it easier to switch between programs and windows, as well as providing more convenient access to Excel's own features.

7 Close Excel.

important

Organizing your sample files folder

When you complete a lesson that involves a sample file that is changed, you will be instructed to save the file with a suffix.

By the time you've completed the course you'll have sample files such as:

Sales-1
Sales-2
Sales-3
Sales-4 ... etc

The first file is the sample file that you downloaded and the others (with the number suffix) are interim versions as you complete each lesson.

The sample file set includes the starting sample file and all interim versions.

The interim versions are provided for three reasons:

1. If your work-in-progress becomes unusable (for example after a system crash) you can continue without starting at the beginning again.

2. If a lesson doesn't seem to give the results described, you can view the example to get some clues about what has gone wrong.

3. When you have completed the course you will use this book as a reference. The interim versions allow you to work through any of the lessons in isolation if you need to remind yourself how to use a specific Excel feature.

It is a good idea to place the sample files in a different folder to your saved work. If you don't do this you'll be over-writing the sample interim files (such as Sales-1, Sales-2 etc) with your own finished work.

The Wealth of Nations

Lesson 1-7: Download the sample files and open/navigate a workbook

Excel uses the analogy of a book that has many pages. In Excel terminology the term: *Workbook* is used for the entire book and *Worksheet* for each of the pages. You'll be learning more about worksheets later in this session in: *Lesson 1-11: View, move, add, rename, delete and navigate worksheet tabs.*

1 Download the sample files (if you haven't already done so).

   1. Open the Safari web browser and type in the URL:

      https://TheSmartMethod.com

   2. Click the *Sample Files* link on the top right of the home page.

   3. Download the sample files for:
      Excel 2019 Essential Skills for Mac.

      Be sure to select the *for Mac* version of the course, as the Windows sample files may not work on a Mac.

2 Move the sample files to your Documents folder.

   By default, the sample files will be downloaded to your *Downloads* folder. They will be easier to access and work with if you move them to your *Documents* folder.

   1. Open Finder by clicking its icon on the Dock.

   2. Click the *Downloads* folder under *Favorites*.
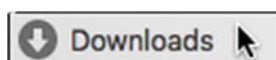
   3. Click and drag the downloaded *AllSessions2019Essential* file into the *Documents* folder.

3 Open the sample workbook: *The Wealth of Nations*.

   1. Open Excel.

   2. Click *Open* on the left-hand menu bar.

   3. Click: *On my Mac* in the central pane.

   4. Navigate to your sample files, which should now be in the *Documents* folder.

   5. Open the *AllSessions2019Essential* folder.

   6. Open the *Session 1* folder.

   7. Double click *The Wealth of Nations* to open the sample workbook.

4 Go to cell ZZ3 using the Name Box.

Excel uses the letter of the column and the number of the row to identify cells. This is called the *cell address*. In the above example the cell address of the active cell is B3.

In Excel 2019 there are a little over a million rows and a little over sixteen thousand columns. You may wonder how it is possible to name all of these columns with only 26 letters in the alphabet.

When Excel runs out of letters it starts using two: X,Y,Z and then AA, AB, AC etc. But even two letters is not enough. When Excel reaches column ZZ it starts using three letters: ZX, ZY, ZZ and then AAA, AAB, AAC etc.

The currently selected cell is called the *Active Cell* and has a green line around it. The Active Cell's address is always displayed in the *Name Box* and its contents are displayed in the *Formula Bar*.

You can also use the *Name Box* to move to a specific cell.

To see this in action, type **ZZ3** into the *Name Box* and then press the **<Enter>** key. You are teleported to cell ZZ3:

note

The Ctrl key

The **<Ctrl>** key is sometimes labelled **<Control>** or just **<^>**.

Most keyboard shortcuts use the **<Cmd>** key interchangeably with **<Ctrl>**, and **<Cmd>** is Apple's recommended key for keyboard shortcuts.

In Excel 2019, the keyboard shortcuts **<Cmd>+<Home>** and **<Ctrl>+<Home>** both worked, but the **<Cmd>+<Home>** shortcut doesn't work in the first release of Excel 2019.

This will probably be fixed in a future update.

If the **<Ctrl>** key isn't working for you, it has probably been disabled in your System Preferences. You can find the settings for this by clicking *System Preferences*, then *Keyboard*, and then *Modifier Keys*.

5   Return to cell A1 by pressing **<Ctrl>+<Home> (↖)**.

See sidebar if you can't find the *Ctrl* key on your keyboard.

6   Go to the end of the worksheet by pressing **<Ctrl>+<End> (↘)**.

7   Use the Scroll Bars.

There are two scroll bars for the Excel window, which appear when you move the mouse cursor close to the edges of the screen.

The vertical scroll bar runs from top to bottom of the window and allows you to quickly move up and down the worksheet.

The horizontal scroll bar is at the bottom of the window and allows you to move to the left and right in wide worksheets. See sidebar for how the scroll bars work.

Lesson 1-8: Save a workbook to a local file

1   Open *The Wealth of Nations* from your sample files folder (if it isn't already open).

2   Save the workbook.

When you are editing a workbook, the changes you make are only held in the computer's memory. If there is a power cut or your computer crashes, you will lose any work that has been done since the last save.

For this reason, you should get into the habit of regularly saving your work.

Even though you haven't changed this workbook, save it by clicking the *Save* button on the *Quick Access Toolbar* at the top left of the screen.
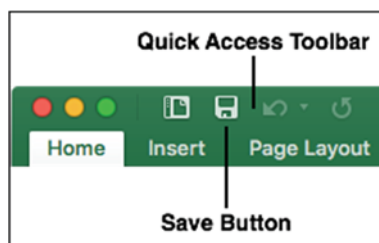
3   Save the workbook with a different name.

1.   Click: ⌘→File→Save As.

   If you are signed into a OneDrive, the following dialog appears:
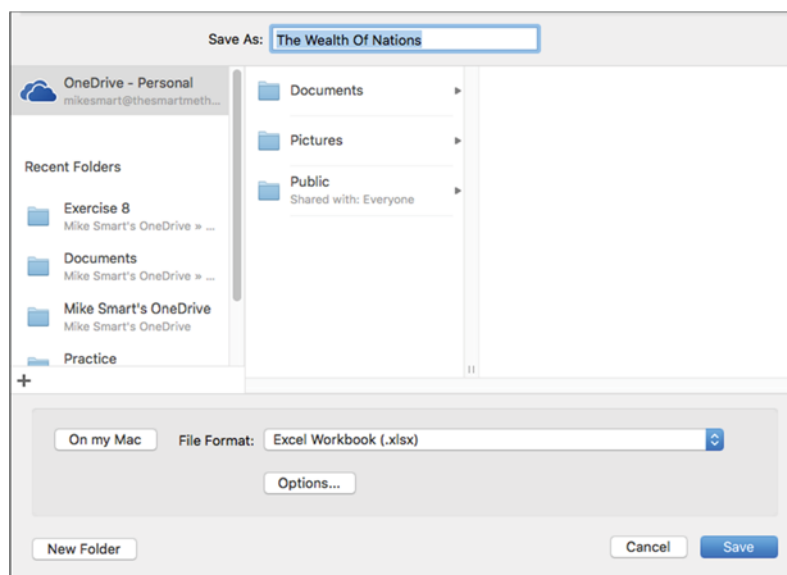
   Saving to a OneDrive enables you to store your files online (see facing page sidebar).

2.   If the OneDrive dialog appears, click the *On my Mac* button.

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note

OneDrive and Cloud Computing

The *Save As* dialog allows you to save your workbook to a OneDrive:
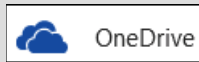
A OneDrive can be thought of as a "disk drive in the sky".

It is just like the Documents folder on your computer but exists on a Microsoft server many miles away, accessed via the Internet.

The OneDrive can be very useful when you need to access your files from several different computers.

A OneDrive also provides an easier way to share files with others.

The OneDrive is part of a completely new way of working called *Cloud Computing*.

Support for Cloud Computing was first added in the Excel 2013 release.

Because Cloud Computing is such an involved (and complex) subject it is beyond the scope of this *Basic Skills* book.

The *Essential Skills* book in this series devotes an entire session to Cloud Computing (in *Session Eight: Cloud Computing*).

This allows you to save the workbook to your own computer instead of your OneDrive.

3. Click the drop-down arrow to the right of the *File Format* drop-down list.

4. A list appears showing a large number of different file types:
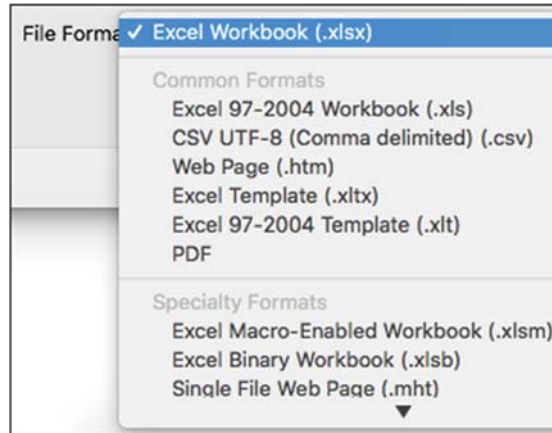
Most of the time you'll want to use the default format: *Excel Workbook* but there may be times when you'll need to save in one of the other formats. You'll learn all about the most important formats (and when you should use them) in the next lesson: *Lesson 1-9: Understand common file formats.* For now, you'll stay with the default: *Excel Workbook* format.

5. Click inside the *Save As* box.

6. Type: **The Wealth of Nations Copy**
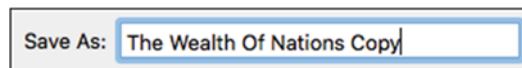
7. Click the *Save* button.

Notice that the name of the workbook in the title bar (at the top of the window) has now changed, indicating that you are now viewing the new workbook that you have just saved.
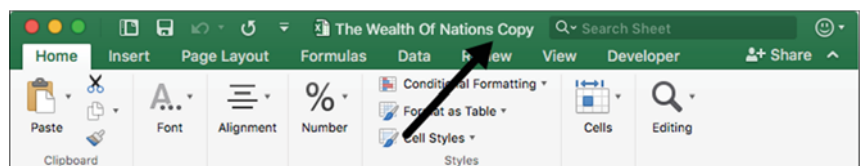
Lesson 1-9: Understand common file formats

1   Open a new blank workbook.

You learned how to do this in: *Lesson 1-2: Start Excel and open a new blank workbook.*

2   View the file formats supported by Excel.

1.   Click ⌘➔File➔Save As.

2.   Click the drop-down arrow to the right of the *File Format* list.

File Format:	Excel Workbook (.xlsx)	⌄

3.

A list appears showing all of the different file formats supported by Excel (see sidebar).

3   Understand the most important file formats.

✓ Excel Workbook (.xlsx)

Common Formats
Excel 97-2004 Workbook (.xls)
CSV UTF-8 (Comma delimited) (.csv)
Web Page (.htm)
Excel Template (.xltx)
Excel 97-2004 Template (.xlt)
PDF

Specialty Formats
Excel Macro-Enabled Workbook (.xlsm)
Excel Binary Workbook (.xlsb)
Single File Web Page (.mht)
Excel Macro-Enabled Template (.xltm)
Tab delimited Text (.txt)
UTF-16 Unicode Text (.txt)
Excel 2004 XML Spreadsheet (.xml)
Microsoft Excel 5.0/95 Workbook (.xls)
Comma Separated Values (.csv)
Space Delimited Text (.prn)
Macintosh Formatted Text (.txt)
MS-DOS Formatted Text (.txt)
Macintosh Comma Separated (.csv)
MS-DOS Comma Separated (.csv)
Data Interchange Format (.dif)
Symbolic Link (.slk)
Excel Add-in (.xlam)
Excel 97-2004 Add-in (.xla)
Strict Open XML Spreadsheet (.xlsx)
OpenDocument Spreadsheet (.ods)

Excel Workbook (the Open XML format)

Before Office 2007 was released, every Office program stored its information on the hard disk in a completely different way. These incompatible formats are called *binary formats*. This made it very difficult to write applications that could be used together.

All of this has changed with the new file format that was first introduced in Office 2007: *Office Open XML.*

Microsoft have published exactly how this format works and given it away free to the world's developer community. This allows other programs to easily work with Excel workbook files. For example, Apple's iPhone supports Office Open XML Email attachments.

Unfortunately, the future has to co-exist with the past and there are still some people in the world (though a rapidly declining number) using pre-2007 versions of Office (97, 2000, 2002, 2003 and 2004). If you save your files in the Open XML format, only people running Office 2007/2008/2010/2011/2013/2016/2019 will be able to read them (but see the sidebar on the facing page for two potential solutions to this problem).

Excel Macro-Enabled Workbook

An Excel Macro-Enabled Workbook is simply a workbook that has program code (called VBA code) embedded within it. Macros are beyond the scope of this book but are covered in the *Excel Expert Skills* book in this series.

While macro code is very powerful it can also be destructive, as it is extremely simple to write damaging viruses within Excel macro code.

Macro programming (also called VBA programming) is a vast subject of its own and is not useful to the vast majority of Excel users.

note

How users of earlier office versions can read your Open XML files

Microsoft has a free download: *Open XML File Format Converter for Mac.*

If users of Excel 2004 or earlier install this, they will be able to convert Open XML format documents into the old 97-2004 workbook format.

Alternatively, you can choose to save your files in the 97-2004 format if you need to allow users of older versions to open them.

note

Sharing files using Cloud Computing features

You should be aware that Excel 2019 provides another way to share files with users that do not have any version of Excel installed upon their computer. This is done using Excel 2019's built in *Cloud Computing* features.

Cloud Computing also allows users to open (and even edit) Excel workbooks using devices such as iPads, Android pads, Apple Macs and Smartphones.

If you progress to the Essential Skills book in this series, you'll find an entire session devoted to this subject in: *Session Eight: Cloud Computing.*

Versions of Excel before Excel 2007 could potentially allow a workbook to infect your machine with a macro virus because all Excel files were capable of carrying macros. Because the formats are now separate, it is easier to avoid opening potentially infected files.

Excel 97-2004 Workbook

This is the old binary format that allows users with earlier versions of Excel to open your workbooks. Some features won't work in earlier versions and if you've used those in your workbook, Excel will display a warning when you save telling you which features will be lost.

Excel Binary Workbook

An oddity in Excel 2007/2008/2010/2011/2013/2016/2019 is a binary format called: *Excel Binary Workbook*. This is a binary alternative to Open XML but it can't be read by earlier versions of Excel. The only advantage of this format is that it loads and saves more quickly than Open XML. You will only notice a speed difference when working with very large worksheets.

PDF

If you need to send a worksheet to a user who does not own a copy of Excel, you can save it in PDF (Portable Document Format). This format was invented by Adobe and is also sometimes called *Adobe Acrobat* or simply *Acrobat*.

All major web browsers can open and display PDF files. In macOS (the operating system used by Apple computers), PDF files will, by default, open using Preview. If you send a user a PDF file you can be confident that they will be able to read and print (but not change) the worksheet.

Other formats

As you can see, there are several other less commonly used formats supported by Excel 2019, but the above formats are the only ones you'll normally encounter. The most important thing to remember is that, unless there's a good reason to use a different format, you should always save documents in the default *Excel Workbook* format.

Lesson 1-10: Pin a workbook and understand file organization

1 Close down and restart Excel.

2 Pin a workbook to the *Recent Workbooks* list.

1. Click *Recent* in the left-hand menu bar.

   A list of recently opened documents appears in the right-hand pane.

   The list begins with the most recently opened workbook (probably the *Wealth of Nations Copy* workbook saved in: *Lesson 1-8: Save a workbook*).
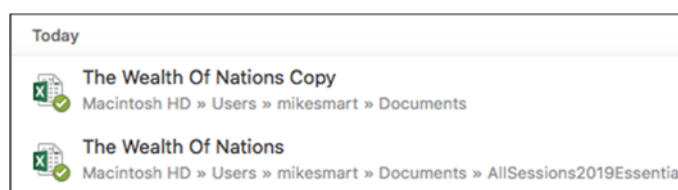
2. Move the mouse cursor to the right of one of the files in the *Recent* list:
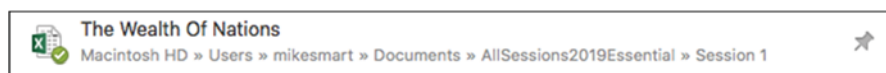
   Notice that a pin icon has appeared next to the workbook name.

   'Pinning' a workbook can be a great time saver, as it enables any workbook that you use a lot to always be shown in the *Recent Workbooks* list. You won't have to waste time looking for them on the hard drive.

   You can also view all pinned documents by clicking the *Pinned* button above the list of recent documents.

3. Click one of the pin icons. The item moves to the top of the list and a pin icon appears next to it.
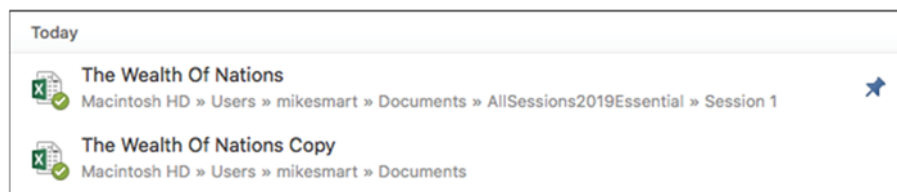
4. Double click on *The Wealth of Nations* to open the workbook.

3 Understand file organization.

By default, Excel saves all workbooks into your *Documents* folder along with other Office documents (such as Word and PowerPoint

The Wealth of Nations

note

How do I create a subfolder?

The concept of folders, subfolders and files is a very fundamental macOS (or OS X) skill rather than an Excel skill.

If you do not have basic macOS skills (an understanding of how your Mac organizes files) you would get good value from a macOS book to give you the foundation skills you need to use any Mac program.

Here's how you create a new subfolder:

1. Use *Finder* to navigate to your *Documents* folder.

2. Click: →File→New Folder.

A new folder will appear called *untitled folder*.

3. You will now be able to type: **Excel** in order to name the folder.

If this doesn't work for you, click the new folder and click: →File→Rename. You'll then be able to type: **Excel** to rename the folder.

files). This clearly is going to cause problems when you have a few hundred files.

It is better to organize yourself from the start by setting up an orderly filing system.

4 Create an *Excel* subfolder beneath your *Documents* folder.

I create a folder called *Excel* beneath the *Documents* folder. In this folder I create subfolders to store my work. You can see a screenshot of my Excel folder below (of course, your needs will be different to mine).
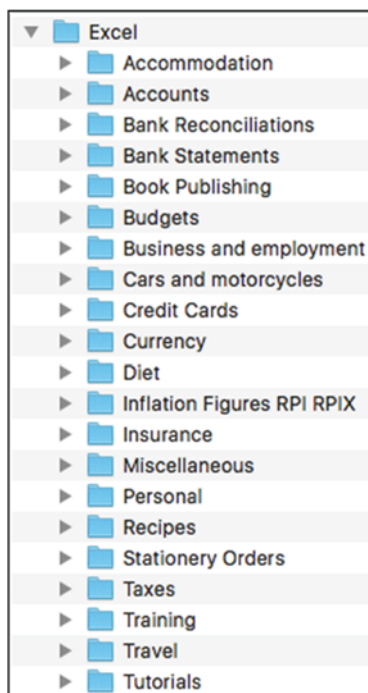
See sidebar if you don't know how to create a subfolder.

note

Changing the default number of worksheets created in new workbooks

When you open a new blank workbook in Excel 2019, one new worksheet is automatically created called *Sheet1.*

In some older versions of Excel (such as Excel 2010 for Windows), three worksheets were created called *Sheet1, Sheet2* and *Sheet3.*

My opinion is that this is a change for the better, as it keeps things neater. Most of my workbooks only need one worksheet.

But if you long for the "good old days" here's how you can make Excel 2019 mimic Excel 2010 (and earlier versions) at start-up:

1. Click:

 →Excel→Preferences

2. Click *General.*

3. Enter the number of sheets required in the *Sheets in new workbooks* box:

Sheets in new workbooks: 3

Lesson 1-11: View, move, add, rename, delete and navigate worksheet tabs

When you save an Excel file onto your hard disk, you are saving a single workbook containing one or more worksheets. You can add as many worksheets as you need to a workbook.

There are two types of worksheet. Regular worksheets contain cells. Chart sheets, as you would expect, each contain a single chart. If you progress to the *Essential Skills* course in this series, you'll learn everything there is to know about charts in: *Session Five: Charts and Graphics.*

1   Open *The Wealth of Nations* from your sample files folder (if it isn't already open).

2   Move between worksheets.

Look at the tabs in the bottom left corner of your screen. Notice that this sample workbook contains three worksheets. Click on each tab in turn to view each worksheet.

| GDP | Life Expectancy | Mobile Phones | + |
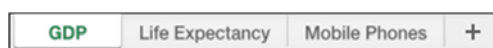
3   Add a new worksheet.

1.   Click the *New Sheet* button (the plus sign next to *Mobile Phones*).

 + A new tab appears named *Sheet1.*

2.   Double-click the *Sheet1* tab.

3.   Type the word **Population** followed by the **<Enter>** key.

| GDP | Population | Life Expectancy | Mobile Phones | + |

4   Move a worksheet's tab.

1.   Click on the *Population* tab (you may have to do this twice).

2.   Hold the mouse button down and drag to the left or right. As you drag, you'll notice an icon of a page and a black arrow showing you where the tab will be placed.

3.   Release the mouse button to move the tab to the location of your choice.

| GDP | Population | Life Expectancy | Mobile Phones | + |

5   Understand the tab scroll buttons

Click
Left one tab
  Right one tab
◀ ▶
  <Cmd> + Click
  Scroll to last tab
  Scroll to first tab

The Wealth of Nations

Because this workbook only has four tabs, there's no need to use the tab scroll buttons (in fact, they don't do anything when all tabs are visible). When there are more tabs than will fit on the screen, the *tab scroll buttons* are used to move between tabs.

6   Move between worksheets using the keyboard.

You can move between worksheets using only the keyboard by pressing the **<Cmd>+<PgUp> (⇕)** and **<Cmd>+<PgDn> (⇕)** keyboard shortcuts to cycle through all of the tabs in your workbook.

7   Change tab colors.

1.   Right click any of the worksheet tabs. A shortcut menu appears.

     If you don't have a mouse with two buttons, **<Ctrl>+Click** will have the same effect (see sidebar).

2.   Move the mouse cursor to *Tab Color* and choose any color.

     It is best practice to choose a color from the top block of *Theme Colors* rather than one of the *Standard Colors.*

     If you progress to the *Essential Skills* course in this series you'll learn to use Themes and will then understand why the use of theme colors is best practice.

3.   Repeat for the other tabs on the worksheet.

8   Delete a worksheet.

Right click on the *Population* tab and select *Delete* from the shortcut menu.

9   Delete several worksheets at the same time.

1.   Hold down the **<Cmd>** key.

2.   Click each tab you want to delete in turn. Don't select them all as it isn't possible to delete every worksheet in a workbook.

3.   Right click any of the selected tabs and select *Delete* from the shortcut menu.

4.   Click *Delete* when prompted.

Don't worry about the missing tabs. You're going to close the workbook without saving it, so you won't overwrite the original workbook.

10   Close the workbook without saving it.

1.   Click: ⌘→File→Close.

     A dialog is displayed:
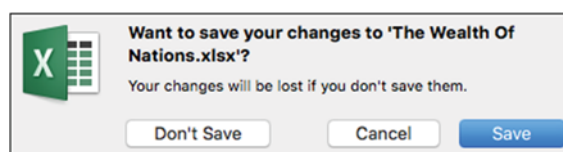
2.   Click *Don't Save* so that you don't over-write the workbook.

     Because you haven't saved the workbook it will remain in its original state when you next open it.

---

note

Right clicking in macOS

Many of Excel's features are easier to access if you have two mouse buttons.

You can see how to configure your mouse to work this way in: *Lesson 1-1: Configure your mouse and understand right clicking.*

To work through the course with only one mouse button, use **<Ctrl>+Click** whenever you are instructed to right click.

---

tip

Alternative ways to do the same thing

Excel often offers more than one way to execute the same command.

As well as using the right-click menu, you can also delete a workbook by using: ⌘→Edit→Sheet→Delete Sheet.

Yet another way to delete a worksheet is to use the Ribbon command:

Home→Cells→Delete→ Delete Sheet

You can close a workbook without using the Menu Bar by using the **<Cmd>+<W>** keyboard shortcut or the red Close button.

important

The Ribbon shows more if you have a wider screen

When I work with Excel I use a 22-inch widescreen monitor running at 1,600*900 pixels.

Excel uses all of the available screen space to display extended descriptions of each feature on the Ribbon.

For example, the *Styles* pane on the *Home* Ribbon shows six buttons for ten common cell styles, allowing them to be applied with a single click rather than two clicks.

Lesson 1-12: Use the Ribbon

The Ribbon provides fast access to hundreds of Excel features.

The sheer breadth of Excel features can seem overwhelming. This book will gently introduce all of the most important features, one at a time.

By the end of the book you'll be really comfortable and productive with the Ribbon.

1 **Start Excel and open a new blank workbook.**

You learned how to do this in: *Lesson 1-2: Start Excel and open a new blank workbook.*

2 **Use Ribbon tabs.**

Each Ribbon tab has its own toolkit available to you. By far the most important tab is the *Home* tab which has buttons for all of the most common and useful features.

Click each tab in turn and view the buttons. The screenshot below has the *Insert* tab selected. Don't worry if the buttons seem cryptic at the moment. Most of them will make complete sense by the end of this book (and if you later go on to complete the *Expert Skills* course, Excel will have no mysteries left at all).

note

Contextual tabs

Sometimes Excel will show you even more tabs.

If you progress to the *Essential Skills* book in this series, you'll learn everything there is to know about charts in: *Session Five: Chars and Graphics.*

When you click on a chart a new tab called *Chart Tools* appears.

The new tab provides access to a range of features relating to Charts.
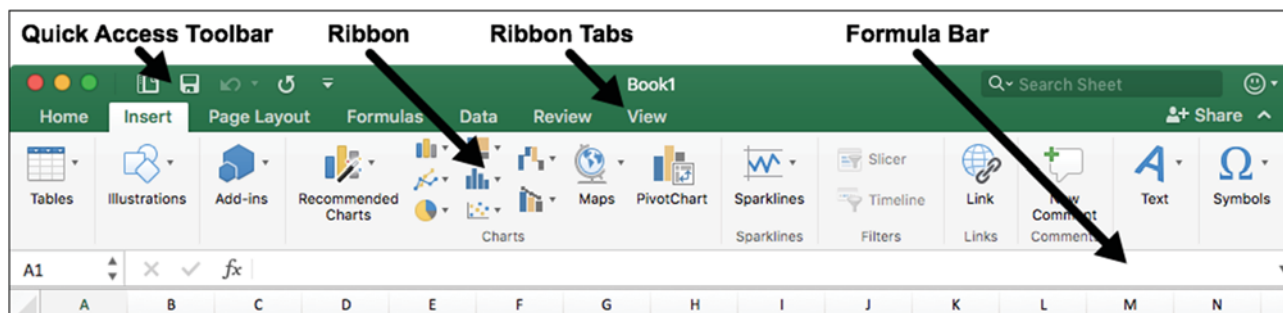
3 **Display Ribbon group names.**

The Ribbon is divided into several groups of icons. Each group has its own name, but these names are hidden by default. Displaying the group names makes it much easier to find what you are looking for.

1. Click: ⌘→Excel→Preferences.

The *Excel Preferences* dialog appears.

2. Click *View*.

3. In the *In Ribbon, Show* group, click *Group Titles*.

4. Close the *Excel Preferences* dialog.

4 **Type the word Test into any blank cell and then press the <Enter> key on the keyboard once.**

Notice how the Active Cell moves to the cell beneath.

5   Make the cell with the word *Test* into the active cell.

Click once on the word *Test* or use the arrow keys on the keyboard to navigate back to the cell. Be very careful not to double-click, otherwise Excel will think that you want to edit the cell.

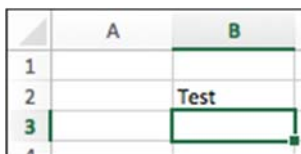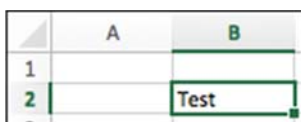6   Click the *Home* tab on the Ribbon and focus upon the *Font* group (it's the second panel from the left). Try clicking each of the buttons and you will see the word *Test* change to reflect your choices.

important

If your Ribbon doesn't look like the illustrations in this book

Remember that the Ribbon will look different depending upon the size of your screen (see important sidebar on previous page) but all of the features will still be there.

Your Ribbon may also look different if you are using Excel 365 (the subscription version of Excel) rather than Excel 2019, as some new features may have been added to Excel 365 since Excel 2019 was released.

This drop-down allows you to change the font to something different to the default Calibri.

This drop-down allows you to change the size of the font (measured in points).

These buttons allow you to change the cell's background and text colour.

Click here once to make the text Bold, Italic or Underlined (or all three). Click again to restore it to Normal.

This drop-down arrow allows you to add a double underline.

Clicking here puts a single underline along the entire length of the bottom of the cell. Try the drop-down arrow too for more border options.

7   Minimize the Ribbon.

Click a second time on the *Home* Ribbon tab.

Notice how the Ribbon is now minimized in order to save screen space (though the *Formula Bar* is still visible).
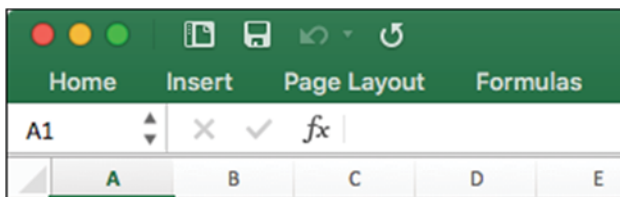
You can always minimize the Ribbon by clicking a second time on the currently selected tab.

8   Bring back the Ribbon.

Click on any tab to bring back the Ribbon.

9   Close Excel without saving changes.

1.   Click: ⌘→File→Close or click the red cross in the top left corner.

2.   When asked if you want to save your changes, click the *Don't Save* button.

Lesson 1-13: Understand Ribbon components

> The whole is more than the sum of its parts.
> *Aristotle, Greek critic, philosopher, physicist & zoologist*
> *(384 BC – 322 BC)*

The Ribbon is made up of several different controls.

Command group

Similar actions are grouped into a cluster. For example, every control relating to numbers is clustered into the *Number* group.

Normal button

Simply executes a command when clicked. The *Bold* button on the *Home* tab is a good example.

Menu button

This type of button has a little down-arrow on it. It will display a drop-down menu when clicked.

Split button

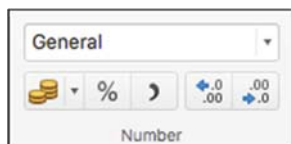This is the hardest button to understand because these buttons look almost the same as the *Menu* button. When you hover the mouse cursor over a split button, the icon and drop-down arrow highlight separately as different "buttons within a button".

A good example is the *Underline* button on the *Home* tab.
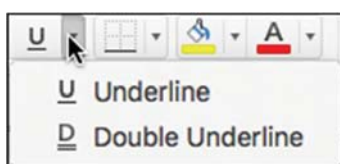
Clicking the icon part of a split button (the U) will perform the default action of the button (in this case a single underline). Clicking the arrow part of the button will display a drop-down list of further choices (in this case the choice between a single and double underline).
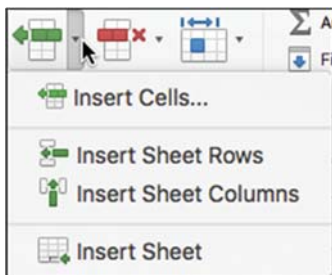
Drop down list

I often shorten this to simply "Drop Down" in this book. A drop down is a simple menu listing several choices.

If you see an ellipsis (…) after a drop down list item, this means that a dialog will be displayed after you click, offering further choices.

Drop down gallery

This is a little like a drop-down list but has graphics to visually demonstrate the effect of each choice.
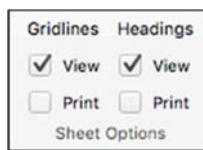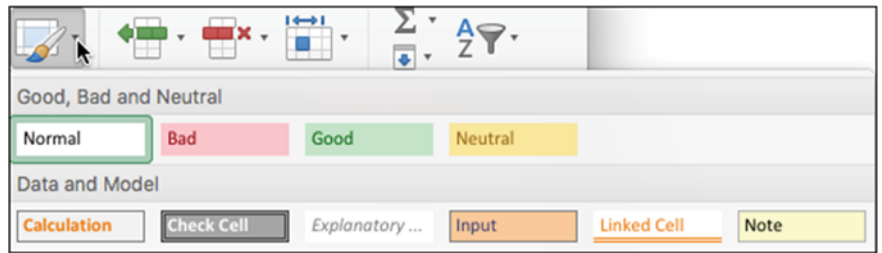
Check box

A little square box that you can click to switch an option on or off.

In this example (from the *Page Layout* Ribbon tab) you are able to switch the gridlines on and off for the screen display and/or the printout.

Lesson 1-14: Customize the Quick Access Toolbar and preview the printout

You can customize the *Quick Access Toolbar* to suit your own special requirements. In this lesson, you'll add some useful buttons to the *Quick Access Toolbar* to save a few clicks when accessing common commands.

The *Quick Access Toolbar* is one of the keys to being really productive with Excel. This lesson will introduce you to the main features.

1   Open *The Wealth of Nations* from your sample files folder.

2   Preview how the *Life Expectancy* worksheet will look when printed.

   1.   Click the *Life Expectancy* tab at the bottom of the worksheet.

   2.   Click: →File→Print.

       The *Print* dialog appears.

       The *Print* dialog displays a huge number of print-related features. A preview of how the page will look when it is printed is displayed on the left-hand side of the dialog.

   3.   Click the *Next Page* and *Previous Page* buttons to move through the print preview.

       Notice there's a button to the bottom-left of the preview pane that allows you to cycle through each page:
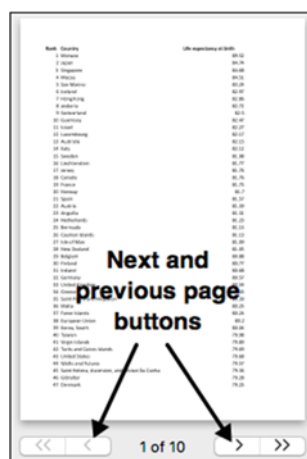
   4.   Click the *Cancel* button at the bottom right of the dialog to return to the workbook.

3   Add a *Print* button to the Quick Access Toolbar.

   Printing is a very useful feature and you'll probably use it a lot. Every time you print, however, it is going to take two clicks of the mouse. Wouldn't it be better if you could open the *Print* dialog with just one click?

   1.   Click the *Customize Quick Access Toolbar button* (see sidebar).

   2.   Click the *Print* item in the drop-down list.

The Wealth of Nations
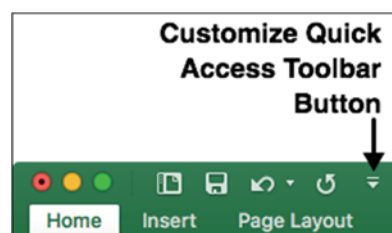
note

Not all Excel commands can be added to the Quick Access Toolbar

Customizing the Quick Access Toolbar is a relatively new feature in *Excel for Mac* and isn't quite as comprehensive as in *Excel for Windows*.

Many Excel commands cannot yet be added to the Quick Access Toolbar, but this can be expected to change in the future as Microsoft continue to release updates.

tip

The Quick Access Toolbar is one of the keys to being really productive with Excel 2019.

Always try to minimize the number of mouse clicks needed to do common tasks.

If you find yourself forever changing tabs to use a button, change two clicks into one by adding the button to the Quick Access Toolbar.

All of those extra clicks add up to a lot of time over the weeks and years.

A new button now appears on the Quick Access Toolbar. You are now able to *Print* your work with a single click of the mouse.
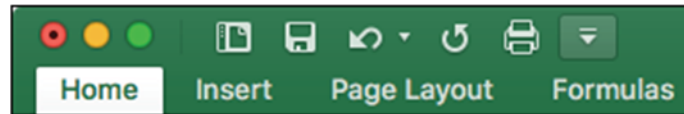
4   Add a *Copy* button to the Quick Access Toolbar.

A *More Commands...* option is available when you click the *Customize Quick Access Toolbar* button. This enables you to add any of Excel's commands to the toolbar.

1.   Click the *Customize Quick Access Toolbar* button.

2.   Click the *More Commands…* item in the dropdown list.

     A dialog appears, showing all of Excel's available commands on the left and the commands on the *Quick Access Toolbar* on the right.

3.   Click *Copy* in the left-hand pane of the dialog.

4.   Click the right arrow in the middle of the dialog.
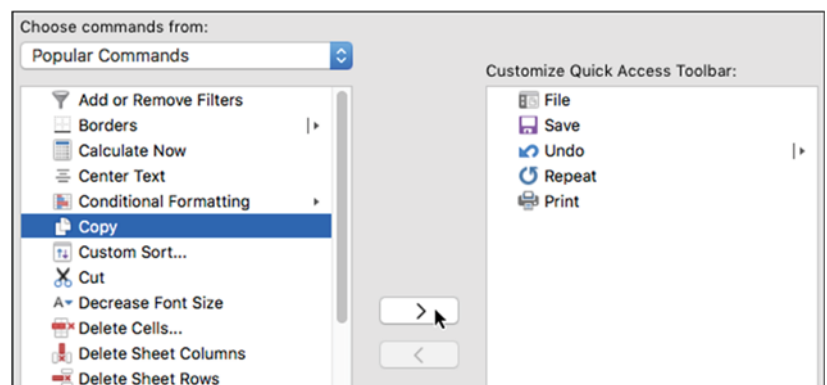
5.   Click *Save*.

     A *Copy* button is added to the Quick Access Toolbar.
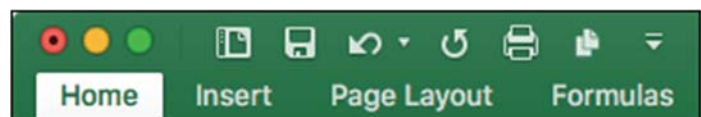
5   Remove the *Copy* button from the Quick Access Toolbar.

1.   Click the *Customize Quick Access Toolbar* button and click *More Commands* from the dropdown list.

2.   Click *Copy* in the right-hand pane of the dialog and then click the left arrow button in the middle of the dialog.

3.   Click *Save.*

Lesson 1-15: Understand views

Views provide different ways to look at your worksheet.

Excel 2019 has three main views. They are:

note

Page Break Preview is only available in Excel 365

The *Page Break Preview* feature has been added to *Excel for Mac* since it was first released.

New feature updates are only provided to Excel 365 users, so this option will not be available if you are not using Excel 365.

If you are using Excel 365 and still don't have this feature, you just need to update to the latest version.

You saw how to update Excel in: *Lesson 1-3: Check that your Excel version is up to date.*

View	Icon	What it is used for
Normal		This is the view you've been using until now. It's the view most users use all of the time when they are working with Excel.
Page Layout		This view allows you to see (almost) exactly what the printout will look like. Unlike running a *Print Preview,* you are able to edit cells just as you can in *Normal* view.
Page Break Preview		A page break indicates when the printer should advance onto a new sheet of paper. If you progress to the Essential Skills course in this series, you'll use this view in: *Lesson 7 5: Insert, delete and preview page breaks,* to make sure that the page breaks in the right place.

1 Open the *Wealth of Nations* sample workbook (if it isn't already open).
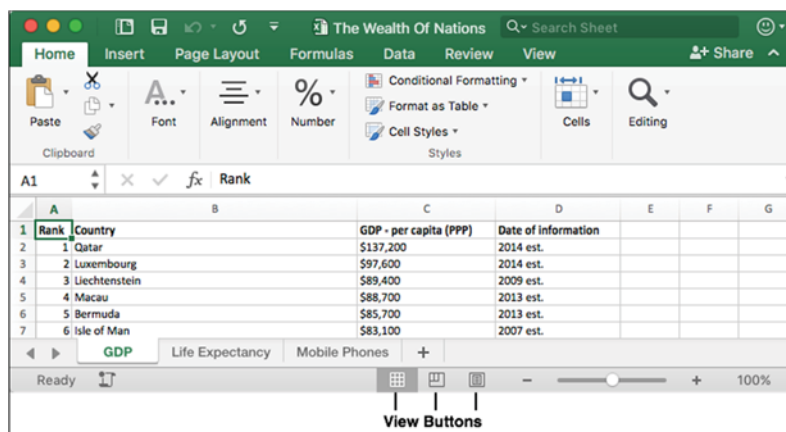
You can change views in two ways:

1. By clicking one of the View buttons at the bottom of the window (see above).

2. By clicking one of the buttons on the Ribbon's *View* tab (see below).
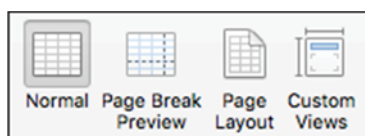
The Wealth of Nations

2 View the GDP worksheet in *Page Layout* view.

1. Click on the *GDP* tab.

2. Select *Page Layout* view by clicking:
    View→Workbook Views→Page Layout.

The worksheet is displayed in *Page Layout* view. You are able to see (almost) exactly what will be printed. Headers, footers and margins are all shown.

You are also able to edit the worksheet.

You may wonder why Excel users don't use *Page Layout* view all of the time when editing worksheets. While some users may prefer to do this, most will want to see the maximum amount of data possible on screen and so will prefer the *Normal* view.

3 Select *Page Break Preview* view.

Click: View→Workbook Views→Page Break Preview.

The worksheet is displayed in *Page Break Preview* view.

This view zooms out, showing the breaks between pages as blue dotted lines:

It is possible to click and drag the dotted lines to change the place where the page breaks.

4 Return to *Normal* view.

Click: View→Workbook Views→Normal.

Lesson 1-16: Hide and Show the Formula Bar and Ribbon

Most desktop computers have large display screens. The space taken by the Ribbon and Formula Bar isn't usually a problem.

If you progress to the Essential Skills course in this series, you'll discover in: *Session Eight: Cloud Computing* that it is now possible to run Excel 2019 on tablet computers (and even on Smartphones). These devices often have a very small display screen, meaning that the ribbon and Formula Bar take up too much valuable screen space.

When screen space is limited, you may wish to hide the Formula Bar, Ribbon, or even both, in order to maximize the number of cells visible on the screen.

1   Open *The Wealth of Nations* from your sample files folder (if it isn't already open) and click the *Life Expectancy* tab.

Notice that the *Ribbon* and *Formula Bar* are taking up space that could be used to display the contents of the worksheet.

Consider the screen below:
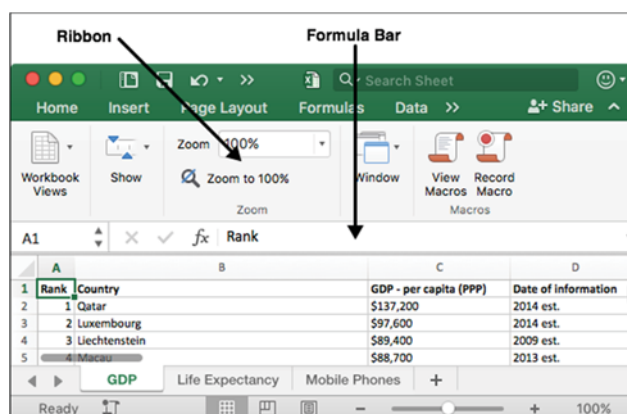
This is the type of smaller screen that you might see on a small tablet device or Smartphone.

Only five rows are visible, making the worksheet difficult to work with. Hiding the Ribbon, Formula Bar, or both, will free up some valuable screen space.

1   Hide the Formula Bar.

Click: View→Show→Formula Bar.

The Formula Bar vanishes:
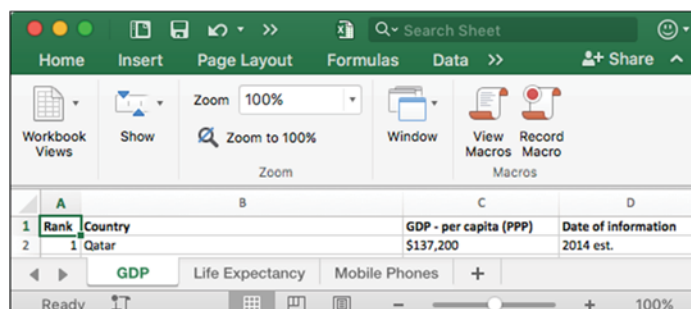
The Wealth of Nations

2   Reduce the Ribbon display to only show tabs.

In: *Lesson 1-12: Use the Ribbon,* you learned how to hide the Ribbon by clicking the selected Ribbon tab a second time.

You can now see as much of the worksheet as possible, which can be very useful on smaller screens.
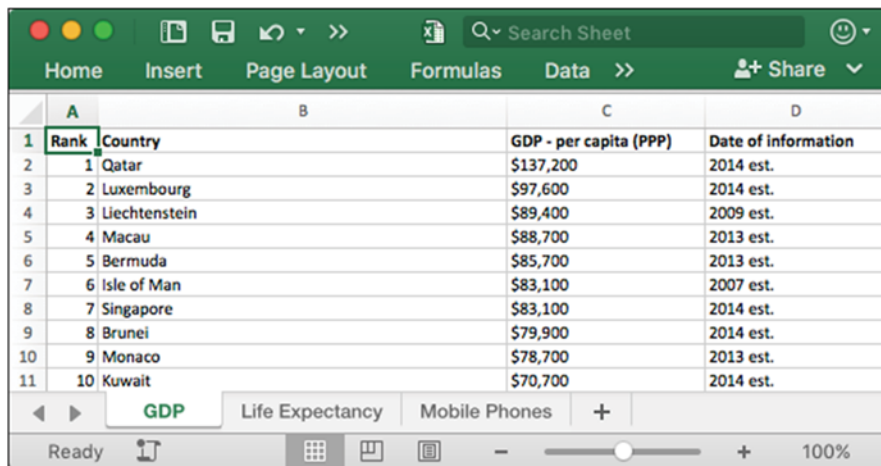
3   Restore the Ribbon and the Formula Bar.

1.   Click any of the Ribbon tabs.

The Ribbon is restored.

2.   Click: View→Show→Formula Bar.

The Formula Bar is restored.
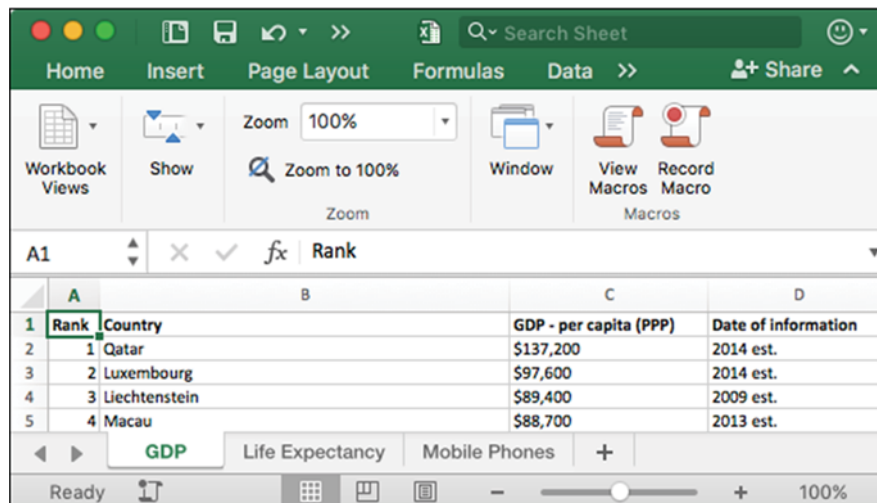
note

The screenshots shown in this lesson may differ from those you see on your screen

The Excel 2019 help system is delivered online. This means that Microsoft are able to constantly correct and update help topics.

For this reason, the information you see on your screen may differ from the screenshots shown in this lesson.

Lesson 1-17: Use the help search system

Excel 2019 for Mac not only provides information about Excel features, but also enables you to execute Ribbon commands directly from inside the help system. This can be a huge time saver.

1 Open the *Wealth of Nations* from your sample files folder (if it isn't already open).

2 Click →Help and click inside the *Search* box.
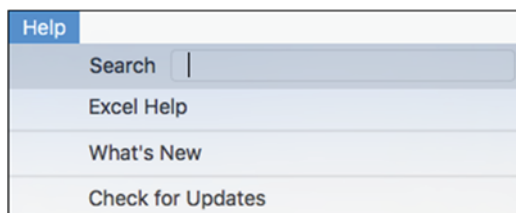
When you click inside the *Search* box, a flashing cursor appears and you are able to type a question.

3 Ask Excel how you can save a file.

You learned how to save a file in: *Lesson 1-8: Save a workbook to a local file.* In that lesson you clicked the *Save* button on the *Quick Access Toolbar.*

Imagine that you have forgotten how to save a file.

Type **Save** into the *Search* box.
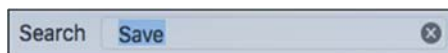
Excel displays a menu of choices, showing every command that contains the word *Save.*

Notice that the list is delineated into two sections. The first section contains commands. The second has the type of regular help topics that you are used to reading in traditional help systems.

4 Execute the Save command directly from the search.

Click the *Save* command at the top of the menu:

In a traditional help system, you would have expected to see some text explaining how the *Save* command works. Instead the command is executed immediately. The workbook is saved in exactly the same way it would have been if you had clicked the *Save* button on the *Quick Access Toolbar.*

The Wealth of Nations

You can see that two other commands are also available:

- *Save As.* You learned how to use the *Save As* command in: *Lesson 1-8: Save a workbook to a local file.*

- *Save As Template.* Templates are not covered in this *Basic Skills* book. The *Essential Skills* book in this series covers the Templates feature in depth (in *Session Three: Taking Your Skills to the Next Level*).

You can see how useful help search is when you can't remember where a command is situated on the Ribbon and want to execute the command as quickly as possible.

You can also see that it could be dangerous to execute commands that you don't understand.

Fortunately, Excel also offers regular help that you can read as a reference.

5 Read the Excel help topics relating to the Save command.

Click: ⌘→Help→Get Help on Save.
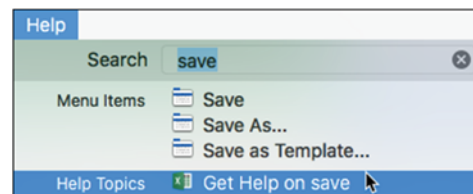
Links to several topics from the Excel 2019 reference manual are shown. You can click on any of these links to read Microsoft's own help topics about *Save* related features.

note

You need an Internet connection to use Excel 2019's help features

In previous versions of Excel, it was possible to access offline help when no Internet connection was available.

Support for offline help has been dropped from Excel 2019. If you have no Internet connection, you will not be able to access Excel's help features.
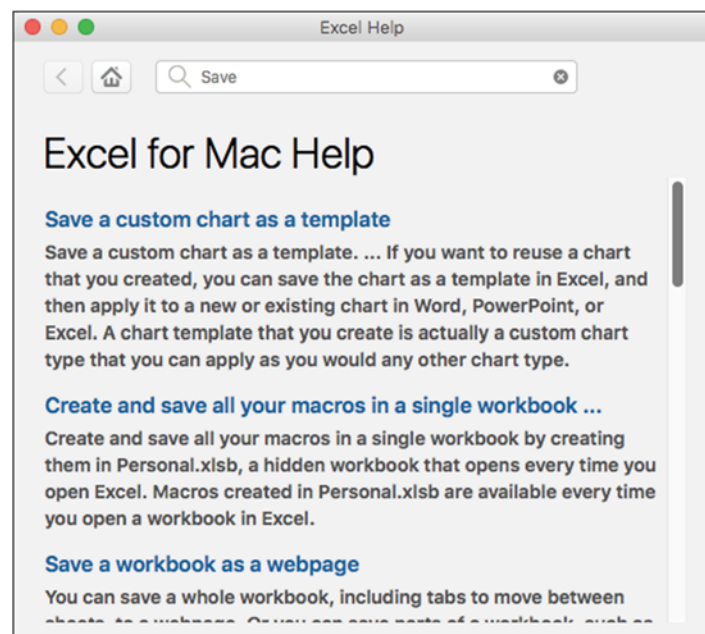
Note that you must be connected to the Internet in order to view the Excel help topics (see sidebar).

Blank page

Session 1: Exercise

In this exercise you'll try to remember the name of each of the Excel screen elements. The answers are on the next page, so you might want to recap by turning the page for a little revision before you start.

Keep trying until you are able to name each of the screen elements from memory. You'll be seeing this terminology during the remainder of the book, so it's important that you can correctly identify each element.
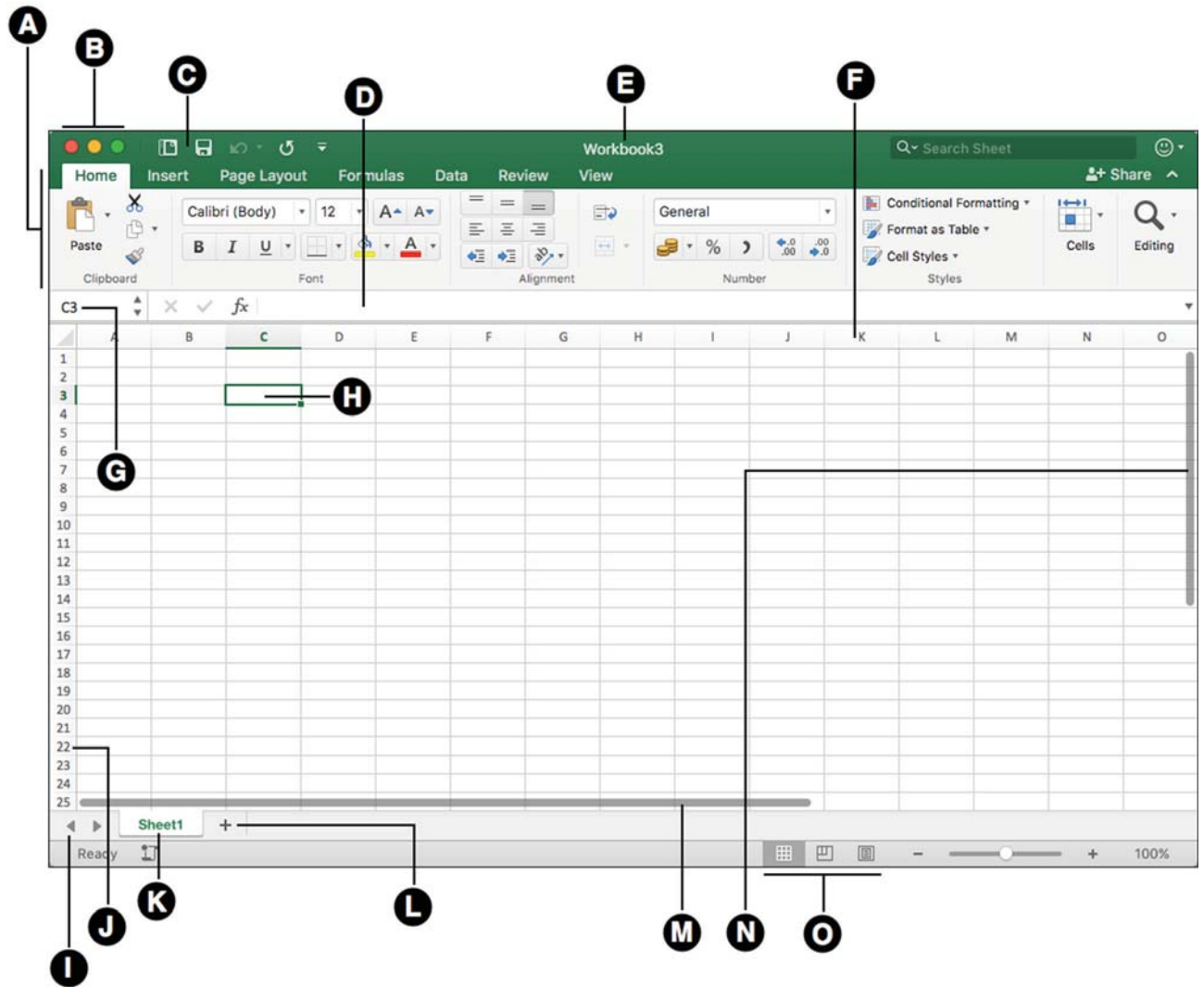
If you need help slide the page to the left

Blank page

Session 1: Exercise answers
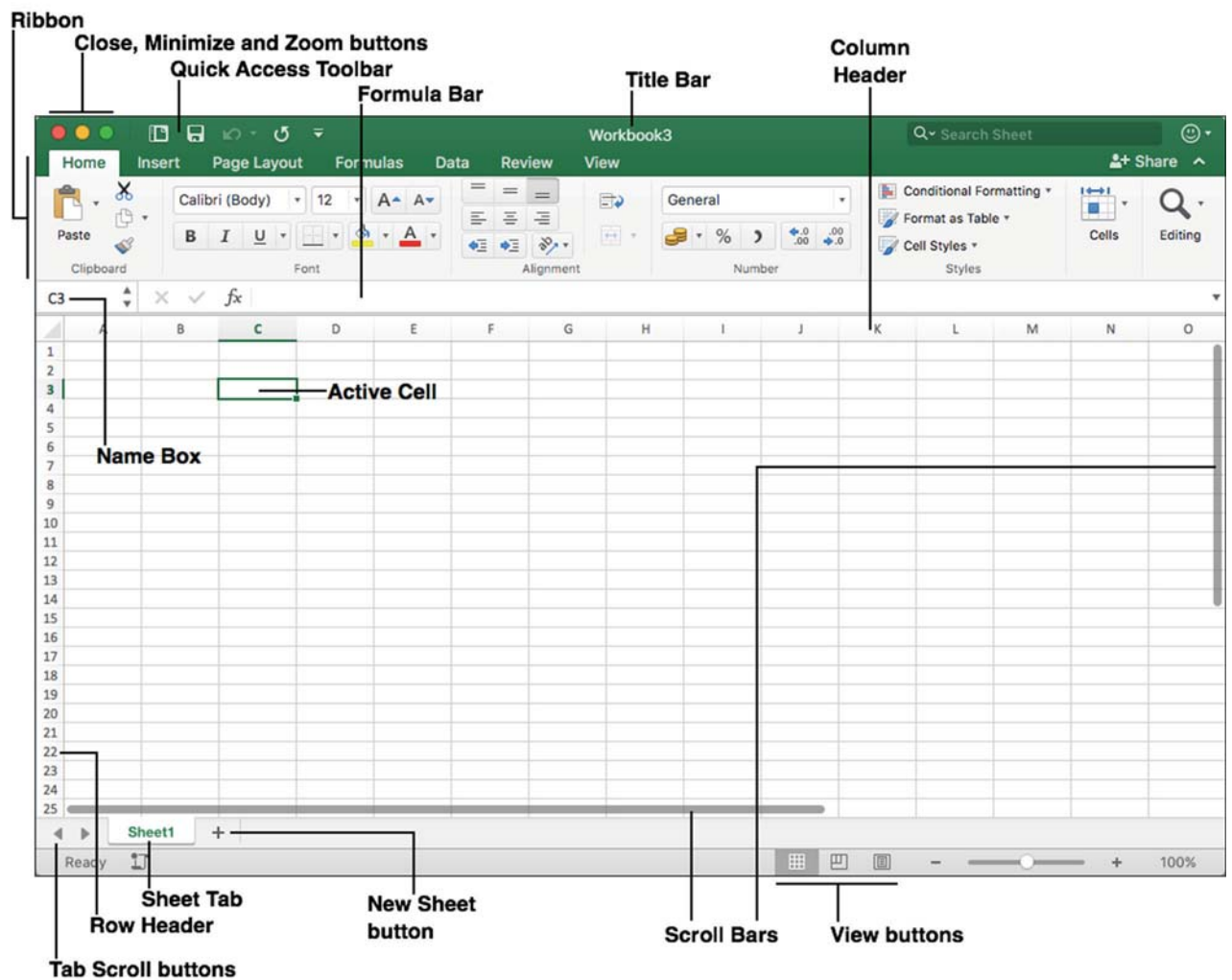
Blank page

2

Session Two: Doing Useful Work with Excel

> Only those who have the patience to do simple things perfectly ever acquire the skill to do difficult things easily.
>
> *Unknown author*

Now that you've mastered the basics, you are ready to do really useful work with this amazing tool. In this session you will learn to use all of Excel's basic features properly. This will put you way ahead of anybody that hasn't been formally trained in Excel best practice. You'll be doing simple things, but you'll be doing them perfectly!

Even after years of daily use, many users are unable to properly use Excel's fundamental features. They often reach their goal, but get there in a very inefficient way, simply because they were never taught how to do things correctly. By the end of this session you'll be astonished with how well you are working with Excel.

Session Objectives

By the end of this session you will be able to:

- Enter text and numbers into a worksheet
- Create a new workbook and view two workbooks at the same time
- Use AutoSum to quickly calculate totals
- Select a range of cells and understand Smart Tags
- Enter data into a range and copy data across a range
- Select adjacent and non-adjacent rows and columns
- Select non-contiguous cell ranges and view summary information
- AutoSelect a range of cells
- Re-size rows and columns
- Use AutoSum to sum a non-contiguous range
- Use AutoSum to quickly calculate averages
- Create your own formulas
- Create functions using Formula AutoComplete
- Use AutoFill for text and numeric series
- Use AutoFill to adjust formulas
- Use AutoFill options
- Speed up your AutoFills and create a custom fill series
- Understand linear and exponential series
- Use Flash Fill to split and concatenate text
- Use the zoom control
- Print out a worksheet

Lesson 2-1: Enter text and numbers into a worksheet

Excel beginners tend to reach for the mouse far too often. One of the keys to productivity with Excel is to avoid using the mouse when entering data. In this lesson you'll quickly populate a worksheet without using the mouse at all.

1   Open the sample file: *First Quarter Sales and Profit.*

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles			
6	London			
7	Paris			
8	Munich			

2   Notice the difference between values and text.

Cells can contain values or text. Values can be numbers, dates or formulas (more on formulas later).

Excel usually does a great job of recognizing when there are values in a cell and when there is text. The giveaway is that text is always (by default) left aligned in the cell and values are right aligned.

Look at the numbers on this worksheet. Notice how they are all right aligned. This lets you know that Excel has correctly recognized them as values and will happily perform mathematical operations using them.

3   Save a value into a cell.

1. Type the value **42000** into cell B5. Notice that the mouse cursor is still flashing in the cell.

      42000
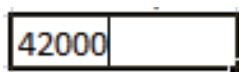
At this stage the value has not been saved into the cell.

If you change your mind, you can still undo the value by pressing the **<ESC>** key at the top left of your keyboard or by clicking the *Cancel button* ☒ on the left-hand side of the Formula Bar.

2. Decide that you want to keep this value in the cell by either pressing the **<Enter>**, **<Tab>** or an **<Arrow>** key on the keyboard, or by clicking the *Confirm button* ✅ on the left-hand side of the Formula Bar.

4   Enter a column of data without using the mouse.

When you enter data into a column, there's no need to use the mouse. Press the **<Enter>** key after each entry and the active cell moves to the cell beneath. Try this now with the following January sales data:

First Quarter Sales and Profit

1. Type **18,000** into cell B6.

2. Press the **<Enter>** key to move to cell B7.

3. Do the same to enter the following values into the next two cells.

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000		
6	London	18,000		
7	Paris	35,000		
8	Munich	12,000		

5 **Enter a row of data without using the mouse.**

You can also enter a row of data without using the mouse.

1. Click in cell C5.

2. Type **39,000** and then press the **<Tab> (→⫿)** key.

The <Tab> key is on the left-hand side of the keyboard above the <Caps Lock> key. Notice how pressing the <Tab> key saves the value into the cell and then moves one cell to the right.

3. Type **43,000** into cell D5 and press the **<Enter>** key.

You magically move to cell C6, as Excel assumes that you want to begin entering data into the next row.

6 **Complete the table without using the mouse.**

By using the **<Tab>** or **<Enter>** key in the right place you should be able to complete the table now without using the mouse:

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000	39,000	43,000
6	London	18,000	20,000	22,000
7	Paris	35,000	26,000	31,000
8	Munich	12,000	15,000	13,000

7 **Change the text in cell B3 to January.**

1. Double-click cell B3. Notice that there is now a flashing cursor in the cell.

2. Type **uary** on the keyboard to change *Jan* to *January*.

3. Press the **<Enter>** key.

8 **Change the text in cell B3 back to Jan using the formula bar.**

Click once in cell B3 and then change the text in the formula bar back to **Jan** (see sidebar).

9 **Save your work as *First Quarter Sales and Profit-2.***

Lesson 2-2: Create a new workbook and view two workbooks at the same time

1   Open Excel and create a new blank workbook.

   1.   Close any open Excel windows and re-open Excel.

   2.   Double click the *Blank Workbook* template to create a new workbook.

     Excel helpfully creates a workbook, unimaginatively named *Book1.* If you already have a workbook open called *Book1*, the new workbook will be called *Book2...* and so on.

     Notice that *Book1* is displayed on the *Title Bar.*
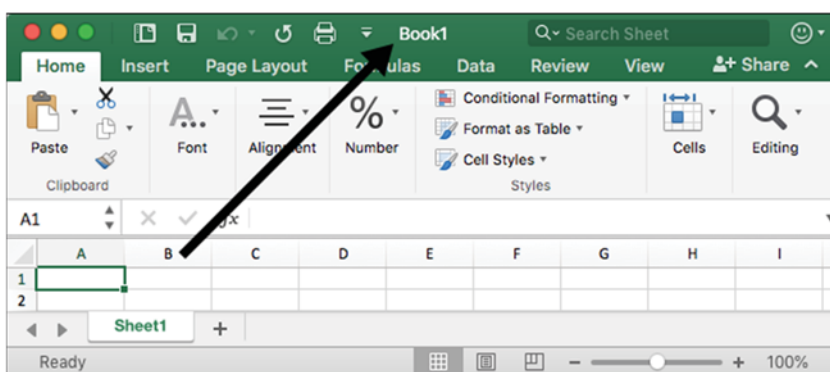
2   Maximize the window without entering Full Screen view.

Hold the **<Alt>** key and click the green *Zoom* button at the top of the Excel window to maximize the window without entering Full Screen view.

It's important that you are not in Full Screen view, as you cannot view full screen windows side by side. You learned about Full Screen view in: *Lesson 1-6: Understand Full Screen view.*

3   Create another new workbook and maximize it.

   1.   Click: ⌘→File→New Workbook.

   2.   A new blank workbook called *Book2* is displayed in the workbook window.

   3.   **<Alt>+Click** the *Zoom* button to maximize the window.

     You could be forgiven for thinking that nothing has happened but you can see that the *Title Bar* now says: *Book2,* showing that you are now looking at a different workbook.
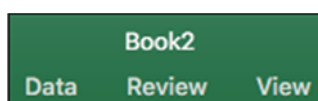
4   Use the Dock to move between workbooks.

Right click the Excel icon on the Dock at the bottom of the screen.

A shortcut menu is displayed, showing both *Book1* and *Book2*.

Try clicking *Book1* and *Book2* to switch between them. Both workbooks are empty so you won't see any difference in the cells, but you should see the name changing in the *Title Bar*.

See sidebar for other methods of switching windows.

5   Display both *Book1* and *Book2* at the same time.

In order to view two workbooks at the same time, they must not be in Full Screen view. If either window is in Full Screen view, you must exit this view using the skills you learned in: *Lesson 1-6: Understand Full Screen view.*

1. Click: ⚫→Window→Arrange.

    The *Arrange Windows* dialog is displayed.

2. Choose the *Horizontal* arrangement and click the *OK* button.

    Both workbooks are now shown, one above the other. Each window occupies exactly half of your screen:
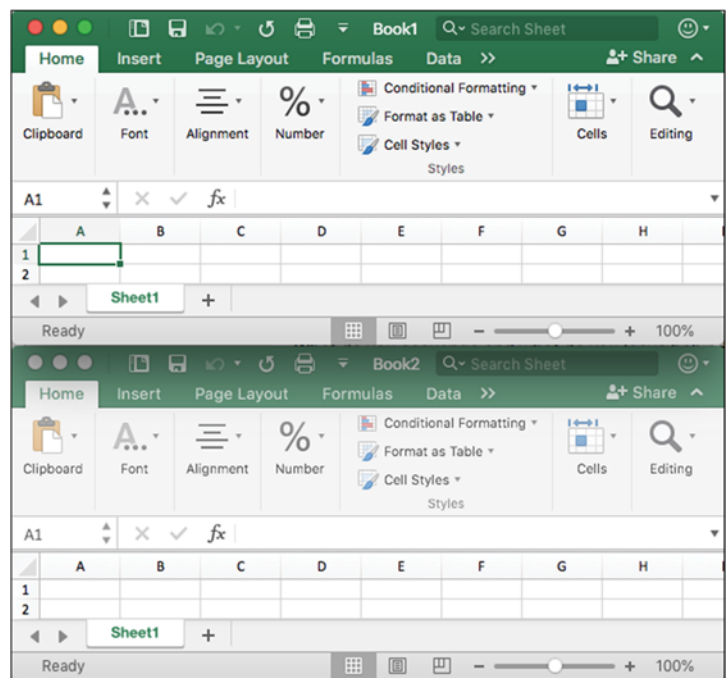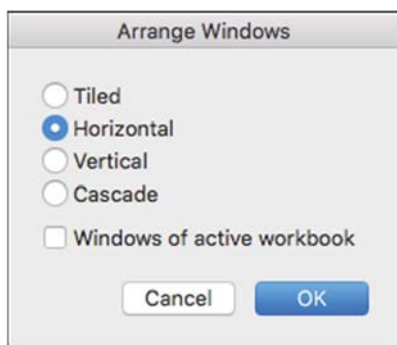
Notice that, as you click each workbook window, the *Title Bar* and the *Close/Minimize/Zoom* buttons light up to show that this is the active window.

6   Close *Book2* and maximize *Book1* to restore the display to a single workbook.

If you've forgotten how to do this, refer back to *Lesson 1-5: Minimize, re-size, move and close the Excel window* and *Lesson 1-6: Understand Full Screen view.*

anecdote

I ran an Excel course for a small company in London a couple of years ago.

The boss had sent his two office staff to learn a little more about Excel.

Before the course began I asked the delegates how long they had been using Excel. They told me that they'd been using it for two years to do all of their office reports.

When I showed them AutoSum they gasped in delight. "This will save us hours" they told me.

I was curious how they had been doing their reports before.

Believe it or not, they had been adding up all of the figures in each column with a calculator and then manually typing the totals at the bottom of each column.

In this case the boss had given them Excel as he had heard it was very good. Unfortunately, he had not initially seen the need to train the staff in its use.

With no training it seemed quite logical to them to use it like a word processor and the boss had still been delighted that his staff were using such impressive technology.

Lesson 2-3: Use AutoSum to quickly calculate totals

Excel's *AutoSum* feature is a really useful and fast way to add the values in a range of cells together.

1   Open *First Quarter Sales and Profit-2* from your sample files folder.

2   In cell A9, type the word **Total** followed by the **<Tab>** key.

The active cell moves to the right and is now in cell B9:

	A	B	C	D
7	Paris	35,000	26,000	31,000
8	Munich	12,000	15,000	13,000
9	Total			

3   Click: Home→Editing→AutoSum 𝚺

AutoSum Button

Σ AutoSum ▾
⬇ Fill ▾   A Z ▾
🧽 Clear ▾   Sort & Filter
        Editing
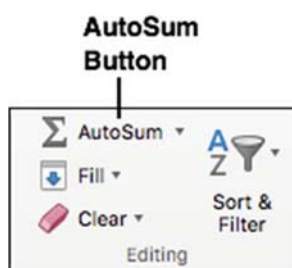
Something interesting has happened to the worksheet:

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000	39,000	43,000
6	London	18,000	20,000	22,000
7	Paris	35,000	26,000	31,000
8	Munich	12,000	15,000	13,000
9	Total	=SUM(B4:B8)		

Excel has placed a *marquee* around the number range that AutoSum has guessed you want to work with. The pattern of dots that marks the boundary of the marquee is called the *marching ants.*

The marching ants surround all of the numbers in the column above, up to the first blank cell or text cell (in this case, up to the word Jan).

=SUM(B4:B8) is your first glimpse of an Excel *Formula.* Formulas always begin with an equals sign. This formula is using the SUM function to compute the Sum (or total) of the values in cells B4 to B8.

4   Press the **<Enter>** key or click the AutoSum button 𝚺 once more to display the total January sales:

First Quarter Sales and Profit-2

tip

Entering an AutoSum using only the keyboard

You can also execute an AutoSum using the keyboard shortcut:

<Cmd>+<Shift>+<T>

	A	B	C	D
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000	39,000	43,000
6	London	18,000	20,000	22,000
7	Paris	35,000	26,000	31,000
8	Munich	12,000	15,000	13,000
9	Total	129,000		

5   Type the word **Total** into cell E3 and press the **<Enter>** key once.

The active cell moves down one row and is now in cell E4.

	A	B	C	D	E
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	
5	Los Angeles	42,000	39,000	43,000	

6   Use AutoSum to calculate sales for New York.

1. Click: Home→Editing→AutoSum. Σ

   This time AutoSum correctly guesses that you want to sum the values to the left of cell E4:

	B	C	D	E	F
3	Jan	Feb	Mar	Total	
4	22,000	29,000	19,000	=SUM(B4:D4)	
5	42,000	39,000	43,000		

2. Press the **<Enter>** key, or click the AutoSum button once more.

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	Total	129,000			

7   Save your work as *First Quarter Sales and Profit-3.*

Lesson 2-4: Select a range of cells and understand Smart Tags

1   Open *First Quarter Sales and Profit-3* from your sample files folder (if it isn't already open).

2   Observe the formula behind the value in cell B9.

Click once on cell B9 or move to it with the arrow keys on your keyboard.

Look at the *formula bar* at the top of the screen. Notice that the cell displays the *value* of a calculation and the formula bar shows the *formula* used to calculate the value:

B9		×	✓	*fx*	=SUM(B4:B8)

	A	B	C	D
8	Munich	12,000	15,000	13,000
9	Total	129,000		128,000
10				
11		**Value**	**Formula**	

3   Delete the contents of cell B9.

Press the **<Delete>** key on your keyboard.
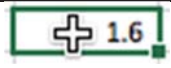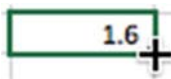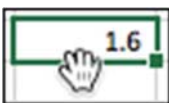
4   Change the word *Total* in cell A9 to **USA Sales** and press the **<Tab>** key once.

The cursor moves to cell B9.

8	Munich	12,000
9	USA Sales	

5   Select cells B4:B5 with your mouse.

When the mouse cursor is hovered over a selected cell, there are three possible cursor shapes:

Cursor	What it does
⊕ 1.6	The white cross (Select) cursor appears when you hover over the center of the active cell. You can then click and drag to select a range of cells.
1.6 ➕	The black cross (AutoFill) cursor appears when you hover over the bottom right-hand corner of the active cell. You'll be covering AutoFill later in this session.
1.6 🖑	The hand (Move) cursor appears when you hover over one of the edges of the cell (but not the bottom right corner).

note

You can also delete cell contents using the mouse

Pressing the **<Delete>** key is the fastest way to delete cell contents.

You can also delete the contents of a cell using the mouse. To do this:

1.   Right-click the cell.

2.   Click *Clear Contents* from the shortcut menu.

First Quarter Sales and Profit-3

note

Selecting cells with the keyboard

To select cells with the keyboard hold down the **<Shift>** key and then use the **<Arrow>** keys to select the range needed.

Beginners often have difficulty selecting cells and end up moving them or AutoFilling them by mistake.

Position the mouse at the center of cell B4 so that you see the white cross (Select) cursor. When you see the white cross, hold down the left mouse button and drag down to cell B5. You have now selected cells B4 and B5 (in Excel terminology you'd say that you have selected the *range* B4:B5).

6   Display total USA sales in cell B9.

Because you have selected only the cells containing USA sales (cells B4:B5), AutoSum can be used to show the value of the selected cells.

Click the AutoSum button to display the total value of the selected cells.

USA sales are shown in cell B9.

Notice the small green triangle at the top left of cell B9. This is Excel's way of saying: "I think you may have made a mistake".

note

Selecting a large range of cells with the <Shift>-click technique

If you need to select a very large range of cells it is sometimes useful to use this technique:

1.   Click the cell in the top left corner of the required range.

2.   If necessary, use the scroll bars to make the bottom right corner of the required range visible.

3.   Hold down the **<Shift>** key.

4.   Click in the bottom right corner of the required range.

7   Inspect a potential error using a Smart Tag.

1.   Click once on cell B9 to make it the active cell.

An *Exclamation Mark* icon appears . This is called a *Smart Tag.*

2.   Hover the mouse cursor over the Smart Tag.

A tip box pops up telling you what Excel thinks you may have done wrong (see below). Of course, in this case, everything is fine. The Smart Tag thinks that perhaps you didn't want to total just the USA sales – but the Smart Tag is mistaken!
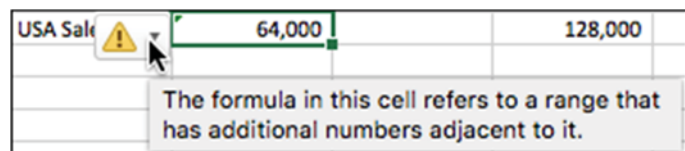
8   Examine the remedial actions suggested by the Smart Tag.

1.   Hover the mouse cursor over the Smart Tag icon .

2.   Click the drop-down arrow that appears.

A list of possible remedial actions is displayed. In this case you can choose *Ignore Error* to remove the green triangle from the corner of the cell.

9   Save your work as *First Quarter Sales and Profit-4.*
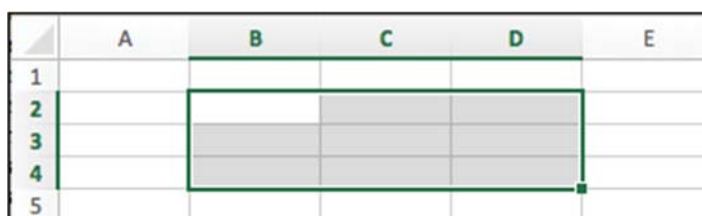
Lesson 2-5: Enter data into a range and copy data across a range

Now that you have mastered the technique of selecting cells, you can use it to speed up data entry.

When you select a range of cells prior to entering data, Excel knows that all data entered belongs in that range. Several key combinations are then available to greatly speed up data entry.

1   Open a new workbook and save it as *Data Range Test*.

2   Select cells B2:D4.

> You learned how to do this in: *Lesson 2-4: Select a range of cells and understand Smart Tags.*

3   Type: **London.**

> The text appears in cell B2, the top left cell in the range selected.

4   Press the **<Enter>** key.
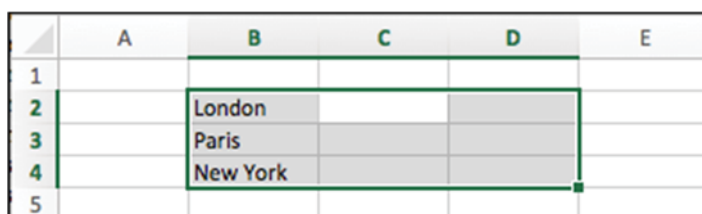
> The cursor moves to cell B3 as it normally would.

5   Type: **Paris** followed by the **<Enter>** key.

> The cursor moves to cell B4 as it normally would.

6   Type: **New York** followed by the **<Enter>** key.
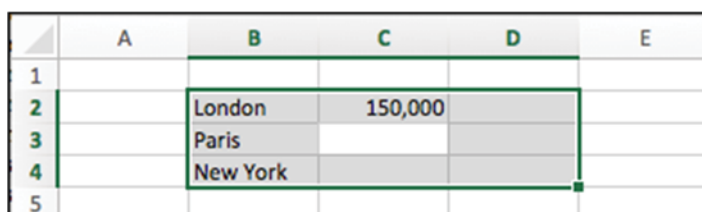
> This time something new happens. The cursor doesn't move to cell B5 as you might expect, but jumps to cell C2 instead.

7   Type: **150,000** followed by the **<Enter>** key.

> The value appears in cell C2 and Excel moves down the column again to cell C3.

8   Press the **<Enter>** key without entering a value to leave C3 blank.

The cursor moves down the column to cell C4.

9   Type **225,000** followed by the **<Enter>** key.

The cursor jumps to cell D2.

10   Press **<Shift>+<Enter>** twice to change your mind about leaving the value for Paris blank.

    1.   Press **<Shift>+<Enter>** to move backwards to the value for New York.

    2.   Press **<Shift>+<Enter>** a second time and you are back to the Paris cell.

	A	B	C	D	E
1					
2		London	150,000		
3		Paris			
4		New York	225,000		
5					

11   Type **180,000** followed by the **<Tab>** key.

<Tab> moves you across the range, to cell D3.

	A	B	C	D	E
1					
2		London	150,000		
3		Paris	180,000		
4		New York	225,000		
5					

You can now appreciate how to use the technique of <Enter>, <Tab>, <Shift>+<Tab> and <Shift>+<Enter> to save a lot of time when entering a whole table of data.

12   Select cells D2:D4.

13   Type **50%** but don't press the <Enter> or <Tab> keys.

The challenge this time is to place the same value into cells D3 and D4 without having to type the value two more times.

14   Press **<Cmd>+<Enter>**.

The value is replicated into all of the other cells in the selected range.

	A	B	C	D	E
1					
2		London	150,000	50%	
3		Paris	180,000	50%	
4		New York	225,000	50%	
5					

15   Click the Save button to save the *Data Range Test* workbook.

note

Entering the % symbol

On most Mac keyboards, the % symbol is entered by pressing: **<Shift>+<5>**.

Lesson 2-6: Select adjacent and non-adjacent rows and columns

1   Open *First Quarter Sales and Profit-4* from your sample files folder (if it isn't already open).

2   Select all of column A.

Hover the mouse cursor over the letter *A* at the top of the column. The column header lights up and the mouse cursor changes to a black down arrow:

A ↓	B	C
1	Sales and Profit Report - First Quarter 2016	

Click to select the entire column. The column becomes slightly shaded and a green line surrounds all of the cells.

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000

3   Click: Home→Font→Bold to bold face the column.

Because the whole column was selected, all of the values become bold faced.

	A	B	C	D
1	**Sales and Profit** Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	**New York**	22,000	29,000	19,000
5	**Los Angeles**	42,000	39,000	43,000
6	**London**	18,000	20,000	22,000

4   Click: Home→Font→Bold once more to change the type in column A back to normal.

5   Select all of row 4.

1.   Hover the mouse cursor over the number on the left-hand side of row 4. The number button lights up and the mouse cursor changes to a black arrow pointing across the row:

3		Jan
⇨	New York	22,000
5	Los Angeles	42,000

2.   Click to select the row.

6   Select columns B and C.

Hover the mouse cursor over the letter at the top of column B until you see the black down arrow. When you see the arrow, click and drag to the right to select columns B and C.

First Quarter Sales and Profit-4

	A	B	C	D
1	Sales and Profit	Report - First Quarter 2016		
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000

7   Select rows 6 and 7.

1.   Hover over the number at the left of row 6 until you see the black arrow pointing across the row.

2.   When you see the arrow, click and drag down to row 7 to select both rows.

5	Los Angeles	42,000	39,000
6	London	18,000	20,000
7	Paris	35,000	26,000

8   Select columns A, B, C, D and E without dragging the mouse.

Sometimes you will need to select a large number of adjacent columns or rows. You could drag across them, but it is often easier to use the following technique:

1.   Select column A.

2.   Hold down the **<Shift>** key.

3.   Select column E.

Columns A to E are selected.

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000

9   Select rows 4 and 6.

Perhaps you need to perform an operation on two non-adjacent rows. To select rows 4 and 6 you need to:

1.   Select row 4.

2.   Hold down the **<Cmd>** key on the keyboard.

3.   Select row 6.

3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000	39,000	43,000
6	London	18,000	20,000	22,000
7	Paris	35,000	26,000	31,000

Lesson 2-7: Select non-contiguous cell ranges and view summary information

Non-contiguous is a very impressive word! It simply means a range of cells that is split across two or more blocks of cells in different parts of the worksheet.

Non-contiguous ranges can be selected using both the mouse and keyboard. The keyboard method may seem a little involved at first but you'll find it much faster once you have the hang of it.

1   Open *First Quarter Sales and Profit-4* from your sample files folder (if it isn't already open).

2   Select the contiguous range B4:D8 with the keyboard.

When you need to select a contiguous range with the keyboard here's how it's done:

1.   Use the arrow keys on the keyboard to navigate to cell B4.

2.   Hold down the **<Shift>** key on the keyboard

3.   Still holding the **<Shift>** key down, use the arrow keys on the keyboard to navigate to cell D8.

The contiguous range B4:D8 is selected.

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	USA Sales	64,000		128,000	

3   Select the non-contiguous range B4:B8,D4:D8 using the mouse.

1.   Select the range B4:B8 using the mouse.

2.   Hold down the **<Cmd>** key and select the range D4:D8 using the mouse.

The non-contiguous range B4:B8,D4:D8 is selected:

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	USA Sales	64,000		128,000	

note

Deselecting cells

Sometimes you might make a mistake when selecting a range of cells. This can be frustrating if you need to select a complex non-contiguous range, so Microsoft have added the ability to deselect cells in Excel 2019.

You can deselect a range of cells by holding down the **<Cmd>** key and either clicking the cells you want to deselect or clicking and dragging to deselect a range of cells.

First Quarter Sales and Profit-4

4 Select the same non-contiguous range with the keyboard.

This is a little more involved than using the simple **<Shift>+<Arrow keys>** method used earlier.

Here's how it's done:

1. Use the arrow keys on the keyboard to navigate to cell B4.

2. Press **<Fn>+<F8>** (F8 is on the very top row of your keyboard).

   See sidebar if you can't find the Fn key or if something unexpected happens when you do this.

3. Use the arrow keys to navigate to cell B8.

4. Press **<Fn>+<Shift>+<F8>**.

5. Use the arrow keys to navigate to cell D4.

6. Press **<Fn>+<F8>**.

7. Use the arrow keys to navigate to cell D8.

8. Press **<Fn>+<Shift>+<F8>**.

The non-contiguous range B4:B8,D4:D8 is selected:

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	USA Sales	64,000		128,000	

5 Obtain total sales figures for January and March using the status bar.

The status bar contains summary information for the currently selected range.

Look at the bottom right of your screen. You can see the average sales and total sales (sum of sales) for January and March:

Average: 25,700   Count: 10   Sum: 257,000

6 View the maximum and minimum sales for January and March using the status bar.

Right-click the status bar and click *Maximum* and *Minimum* from the pop-up menu (see sidebar).

The status bar now also displays maximum and minimum values.

✓ Average
✓ Count
   Numerical Count
✓ Minimum
✓ Maximum
✓ Sum

Average: 25,700   Count: 10   Min: 12,000   Max: 43,000   Sum: 257,000

7 Close the workbook without saving.

Lesson 2-8: AutoSelect a range of cells

When data is arranged in a block (as it is in the Sales Report used in this lesson) it is referred to as a *Range*.

You will often want to select a row or column of cells within a range, or even the entire range.

You can select ranges by using any of the techniques covered so far but this could be very time consuming if the range encompassed hundreds, or even thousands, of rows and columns.

In this lesson you'll learn how to select range rows, range columns and entire ranges with a few clicks of the mouse.

1   Open *Sales Report* from your sample files folder.

This report contains a single block of cells in the range A3 to E19.

	A	B	C	D	E
1	Weekly Sales Report				
2					
3	Invoice No	Date	Customer	Country	Total
4	10918	10 March 2016	Bottom-Dollar Markets	Canada	1,700.81
5	10917	10 March 2016	Romero y tomillo	Spain	429.92
6	10926	10 March 2016	Ana Trujillo Emparedados y helados	Mexico	604.42
7	10929	11 March 2016	Frankenversand	Germany	1,380.33
8	10934	11 March 2016	Lehmanns Marktstand	Germany	587.50
9	10939	11 March 2016	Magazzini Alimentari Riuniti	Italy	749.05
10	10939	11 March 2016	Magazzini Alimentari Riuniti	Italy	- 749.05
11	10925	12 March 2016	Hanari Carnes	Brazil	558.29
12	10944	12 March 2016	Bottom-Dollar Markets	Canada	1,204.75
13	10923	12 March 2016	La maison d'Asie	France	879.83
14	10937	13 March 2016	Cactus Comidas para llevar	Argentina	757.64
15	10947	13 March 2016	B's Beverages	UK	258.50
16	10933	13 March 2016	Island Trading	UK	1,081.71
17	10938	14 March 2016	QUICK-Stop	Germany	3,209.95
18	10949	14 March 2016	Bottom-Dollar Markets	Canada	5,195.85
19	10945	14 March 2016	Morgenstern Gesundkost	Germany	287.88
20					
21	This report excludes sales to Asia and South Africa.				

Range

2   Select all cells within the range to the right of cell A7.

1.   Click in cell A7 to make it the active cell.

2.   Hover over the right-hand border of cell A7 until you see the hand cursor shape.

7	10929	1 March 2016
8	10934	11 March 2016

3.   When you see this cursor shape, hold down the **<Shift>** key and double-click.

All cells to the right of A7, but within the range, are selected.

7	10929	11 March 2016	Frankenversand		Germany	1,380.33

Sales Report

3   Select all cells within the range except the header row.

1.   Click in cell A4 to make it the active cell.

note

Other ways to AutoSelect a range

Using the keyboard

Here's how you would select the entire range in the Weekly Sales Report (excluding the header row) using the keyboard method.

Make cell A4 the active cell by navigating to it with the **<Arrow>** keys.

1. Press: **<Cmd>+<Shift>+ <DownArrow>**

    Cells A4:A19 are selected.

2. Press: **<Cmd>+<Shift>+ <RightArrow>**

    The entire range (excluding the header row) is selected.

Using shortcut keys

The shortcut keys method is the fastest way to select the entire range *including* the header row.

1. Click anywhere inside the range.

2. Press: **<Cmd>+<A>**

    The entire range (including the header row) is selected.
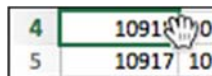
From the Menu Bar

The Menu Bar method isn't as powerful as the other methods, but does provide a way to select the current range (described as the *region* in the dialog).

Make sure that the active cell is within the range.

1. Click:

    ⌘➜Edit➜Find➜Go To…

    The *Go To* dialog is displayed.

2. Click *Special…*

    The *Go To Special* dialog is displayed.

3. Click the *Current Region* option button and then click the *OK* button.

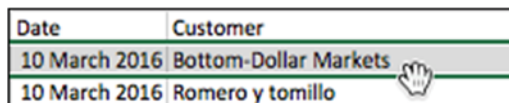2. Hover over the right-hand border of cell A4 until you see the hand cursor shape.

3. When you see this cursor shape, hold down the **<Shift>** key and double-click.

    All cells to the right of cell A4, but within the range, are selected.

4. Hover over the bottom border of the selected cells until you see the hand cursor shape.

5. When you see this cursor shape, hold down the **<Shift>** key and double-click.

The entire range (except the header row) is selected.

You can also use this technique to select cells to the left of the active cell or above the active cell.

4   Close the workbook without saving.

Lesson 2-9: Re-size rows and columns

1   Open *First Quarter Sales and Profit-4* from your sample files folder (if it isn't already open).

Notice that columns B, C, D and E are far too wide for their contents. It would be useful to make them narrower to keep the worksheet compact.

2   Re-size column B so that it is just wide enough to contain the January sales figures.

Hover over the line separating the letters B and C until you see the *re-size* cursor shape:

When you see this shape, keep the mouse still and then click and drag to the left. Column B will re-size as you drag. Make it narrower so that the values just fit in the column. Notice that the column width is displayed in points and pixels as you drag.

3   Re-size column B so that it is too narrow to contain the January sales figures.

Notice that when the column isn't wide enough to contain the contents, hash signs are shown instead of values (if you're used to hashes being called **pound signs** or **number signs** see the sidebar).

4   Automatically re-size column B so that it is a perfect fit for the widest cell in the column.

1. Hover over the line separating the letters B and C until you see the re-size cursor shape:

2. When you see this shape, double-click to automatically re-size column B.

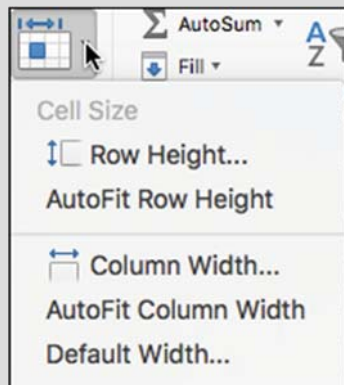5   Automatically re-size every column in the worksheet in one operation.

First Quarter Sales and Profit-4

note

Other ways to re-size rows and columns

You can also re-size rows and columns using the Ribbon.

Click: Home→Cells→Format.

A drop-down menu appears.

You can use the *Row Height* and *Column Width* options to set the row or column to a specific number of centimeters or inches (depending on your Excel settings).

You can also use the *AutoFit Row Height* and *AutoFit Column Width* options to automatically size the row or column (you achieved this more efficiently with a double-click in the lesson).

Default Width… allows you to set a new width for all columns, but this will not affect columns that have already been manually resized.

You can also resize rows and columns using the following Menu Bar commands:

 →Format→Row→Height
 →Format→Column→Width

1. Select every cell in the worksheet by clicking the *select all* button in the top left corner of the worksheet (you can also do this by clicking in any blank cell and then pressing **<Cmd>+<A>**).
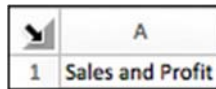
2. Hover over the intersection of any two columns until you see the re-size cursor shape ⊞ and then double-click.

   Every column is now perfectly sized.

   Notice that AutoFit has done its job rather too well. Column A is now wide enough to accommodate all of the text in cell A1.

6 Automatically re-size column A so that it is only wide enough to contain the longest city name (Los Angeles).

1. Select cells A4:A9.

2. Click: Home→Cells→Format→AutoFit Column Width.

This time the column is automatically sized so that it is wide enough to contain all of the text in the selected cells.

Notice that the text has spilled over from cell A1 into the adjoining columns B, C, D and E. This always happens when a cell contains text and the adjacent cells are empty.

7 Manually size row 3 so that it is about twice as tall as the other rows.

Do this in exactly the same way as you re-sized the columns but, this time, hover between the intersection of rows 3 and 4 until you see the re-size cursor shape, and then click and drag downwards.

8 Auto-resize row 3 so that it is the same size as the other rows again.

1. Hover over the line separating the numbers 3 and 4 until you see the re-size cursor shape. ⊞

2. When you see this shape, double-click to automatically re-size row 3.

9 Close Excel without saving.

Lesson 2-10: Use AutoSum to sum a non-contiguous range

In: *Lesson 2-7: Select non-contiguous cell ranges and view summary information*, you learned how to view the sum of January and March sales using the status bar. But how can you put that value onto the worksheet?

Now that you have the hang of selecting non-contiguous ranges, you can use this skill in conjunction with your AutoSum skills to create a formula that will calculate the total of a non-contiguous range.

1   Open *First Quarter Sales and Profit*-4 from your sample files folder (if it isn't already open).

2   Enter the text **Jan/Mar Sales** in cell A10 and press the **<Tab>** key.

   The active cell moves to cell B10.

3   Re-size column A so that it is wide enough to contain the text.

   1.   Hover over the line separating the letters A and B until you see the re-size cursor shape:

   2.   When you see this shape, keep the mouse still and then click and drag to the right. Column A will re-size as you drag. Make it wider so that the words *Jan/Mar Sales* comfortably fit in the column:

	A	B	C	D
1	Sales and Profit Report - First Quarter 2016			
2				
3		Jan	Feb	Mar
4	New York	22,000	29,000	19,000
5	Los Angeles	42,000	39,000	43,000
6	London	18,000	20,000	22,000
7	Paris	35,000	26,000	31,000
8	Munich	12,000	15,000	13,000
9	USA Sales	64,000		
10	Jan/Mar Sales			

4   Use AutoSum to calculate the total sales for January and March in cell B10.

   1.   Click Home→Editing→ (the AutoSum button).

   An AutoSum appears in cell B10, but it isn't anything like what you want yet. AutoSum guesses that you want to sum the USA Sales total.

8	Munich	12,000	15,000	13,000
9	USA Sales	64,000		
10	Jan/Mar Sales	=SUM(B9)		
11				

   2.   Select the range B4:B8 with the mouse.

3. Hold down the **<Cmd>** key and select the range D4:D8 with the mouse.

Notice that the non-contiguous range **B4:B8,D4:D8** is shown in the AutoSum's formula:

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	USA Sales	64,000			
10	Jan/Mar Sales	=SUM(B4:B8,D4:D8			
11					

4. Press the **<Enter>** key or click the AutoSum button Σ again to show the sales for January and March in cell B10.

	A	B	C	D	E
1	Sales and Profit Report - First Quarter 2016				
2					
3		Jan	Feb	Mar	Total
4	New York	22,000	29,000	19,000	70,000
5	Los Angeles	42,000	39,000	43,000	
6	London	18,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	
8	Munich	12,000	15,000	13,000	
9	USA Sales	64,000			
10	Jan/Mar Sales	257,000			
11					

5 Save your work as *First Quarter Sales and Profit-5*.

Lesson 2-11: Use AutoSum to quickly calculate averages

Excel's *AutoSum* feature isn't only restricted to addition. It is also able to compute averages and maximum/minimum values.

In this lesson you'll use AutoSum to calculate the average sales for each month.

1   Open *First Quarter Sales and Profit-5* from your sample files folder (if it isn't already open).
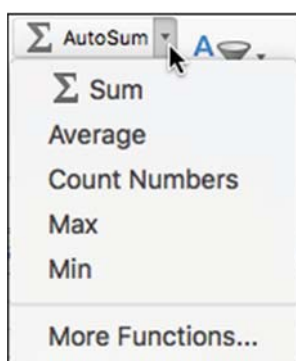
2   Delete cells E3:E4.

   Select cells E3 and E4 and press the **<Delete>** key on your keyboard.

3   Type the word **Average** in cell E3 and press the **<Enter>** key.

   The cursor moves to cell E4.

	A	B	C	D	E
3		Jan	Feb	Mar	Average
4	New York	22,000	29,000	19,000	

4   Use AutoSum to create a formula that will show the average New York sales in cell E4.

   1.   Click: Home→Editing→AutoSum→Drop down arrow (see sidebar).

   A drop-down menu is displayed, showing all of the different ways in which AutoSum can operate upon a range of cells.

   2.   Click *Average*.

   Excel generates an AVERAGE function and inserts the cell range B4:D4. This is exactly what you want:

E	F
Average	
=AVERAGE(B4:D4)	

   3.   Press the **<Enter>** key or click the AutoSum button Σ again to see the average sales for New York:

3		Jan	Feb	Mar	Average
4	New York	22,000	29,000	19,000	23,333

5   Type the word: **Maximum** into cell F3 and then press the **<Enter>** key.

6   Use AutoSum to create a formula in cell F4 that will show the Maximum New York sales for this period.

   1.   Place an AutoSum in cell F4, but this time choose *Max* from the drop-down menu.

   This time you have a small problem. AutoSum is including the average value (23,333) in the calculation.

Σ AutoSum ⌄ A⌄.
  Σ Sum
  Average
  Count Numbers
  Max
  Min

  More Functions...

First Quarter Sales and Profit-5

B	C	D	E	F
Jan	Feb	Mar	Average	Maximum
22,000	29,000	19,000	23,333	=MAX(B4:E4)

2. Select cells B4:D4 with the mouse

    The marquee now covers the correct cells and the average value in cell E4 is no longer included.

3		Jan	Feb	Mar	Average	Maximum
4	New York	22,000	29,000	19,000	23,333	=MAX(B4:D4)

    Notice that the MAX function is now working with the range B4:D4.

3. Press the **<Enter>** key or click the AutoSum button Σ once more to see the maximum sales the New York office managed during the first quarter of the year:

3		Jan	Feb	Mar	Average	Maximum
4	New York	22,000	29,000	19,000	23,333	29,000

7   Change the words *USA Sales* in cell A9 back to **Sales** and press the **<Tab>** key.

8   Press the **<Fn>+<F2>** keys on the keyboard (or double-click cell B9) to bring back the marquee (shown as a blue box).

9   Adjust the marquee using click and drag so that all offices are included in the Sales total.

    Notice that there is a small blue square on each corner of the range. These are called *sizing handles*.

    1. Hover the mouse cursor over the bottom right (or bottom left) sizing handle until the cursor shape changes to a double headed arrow. It is really important that you see the double headed arrow and not the hand or white cross.

4	22,000
5	42,000
6	18,000

    2. When you see the double headed arrow, click and drag with the mouse down to cell B8.

    3. Release the mouse button.

    4. Press the **<Enter>** key or click the AutoSum button Σ again.

	A	B
3		Jan
4	New York	22,000
5	Los Angeles	42,000
6	London	18,000
7	Paris	35,000
8	Munich	12,000
9	Sales	129,000
10	Jan/Mar Sales	257,000

10 Save your work as *First Quarter Sales and Profit-6.*

---

tip

Another way to bring back the blue box showing a range is to click the range in the *Formula Bar.*

Lesson 2-12: Create your own formulas

The AutoSum tool is very useful for quickly inserting SUM(), AVERAGE(), COUNT(), MAX() and MIN() formulas into cells. Many Excel users never get any further with their formulas than this.

In this session you'll create your own formulas without the use of AutoSum. You'll be amazed at how easy it is.

1 Open *First Quarter Sales and Profit*-6 from your sample files folder (if it isn't already open).

2 Select cells A10:B10 and press the **<Delete>** key once.

The previous contents of cells A10:B10 are removed.

3 Type the word **Costs** into cell A11 and **Profit** into cell A12.

4 Type the value **83,000** into cell B11 and press the **<Enter>** key to move down to cell B12.

11	Costs	83,000
12	Profit	

5 Enter a formula into cell B12 to compute the profit made in January.

1. Type: **=B9-B11** into cell B12.

2. Press the **<Enter>** key.

The profit for January is displayed:

9	Sales	129,000
10		
11	Costs	83,000
12	Profit	46,000

6 Enter the formula again using the mouse to select cell references.

The method that you have just used to enter the formula works just fine but it isn't the best method. Sooner or later you will make a mistake. For example, you could easily type =**B8-B11**, resulting in an incorrect answer.

To eliminate such errors, you should always select cell references visually rather than simply typing them in. You can visually select cells using either the mouse or the keyboard. First you'll use the mouse method.

1. Click in cell B12 and press the **<Delete>** key on the keyboard to clear the old formula.

2. Press the equals **<=>** key on the keyboard.

3. Click once on the value 129,000 in cell B9.

4. Press the minus **<->** key on the keyboard.

5. Click once on the value 83,000 in cell B11.

6. Press the **<Enter>** key on the keyboard.

important

Formulas automatically recalculate whenever any of the cells in the formula change.

For example: If you were to change the *Paris* sales to 45,000 this would cause cell B9 to re-calculate to 139,000.

Because B9 has changed this would, in turn, cause the profit to recalculate to 56,000.

First Quarter Sales and Profit-6

If you followed the above steps carefully you will see that you have created the same formula but with a much lower possibility of making a mistake.

7 Enter the formula again using the visual keyboard technique.

The very best Excel experts hardly use the mouse. You waste valuable seconds every time you reach for the mouse.

Here's the expert technique of visual selection via keyboard:

1. Use the arrow keys to navigate to cell B12 and then press the **<Delete>** key on the keyboard to clear the old formula.

2. Press the **<=>** key on the keyboard.

3. Press the **<Up Arrow>** key three times to move to cell B9.

4. Press the **<->** key on the keyboard.

5. Press the **<Up Arrow>** key once to move to cell B11.

6. Press the **<Enter>** key on the keyboard.

8 Type **10% Bonus** into cell B13.

This employer is very generous and pays the staff ten percent of all profits as an incentive bonus.

In cell A13 type the words: **10% Bonus** and then press the **<Tab>** key on the keyboard to move to cell B13.

9 Enter a formula that uses the multiplication operator.

The multiplication operator is not an X as you might expect but an asterisk (*). The other Excel operators are shown in the sidebar.

You need to press **<Shift>+<8>** to enter an asterisk. If you are using a full-size keyboard with a numeric keypad at the right-hand side you can also use the numeric keypad's **<*>** key.

Whichever key you use you'll still see an asterisk in the formula.

Use either the *mouse selection* technique or the *visual keyboard* technique to enter the formula shown below into cell B13 and then press the **<Enter>** key to see how much bonus was earned:

=B12*0.1

Note that multiplying a value by 0.1 calculates ten percent of the value. If you progress to the *Essential Skills* course in this series, you'll learn more about calculating percentages in: *Lesson 4-3: Format numbers using built-in number formats.*

10 Save your work as *First Quarter Sales and Profit-7.*

important

The Excel Operators

	Name	Example
+	Addition	1+2
-	Subtraction	7-5
*	Multiplication	6*3
/	Division	15/5
%	Percent	25%
^	Exponentiation	4^2

First Quarter Sales and Profit-7

Lesson 2-13: Create functions using Formula AutoComplete

1   Open *First Quarter Sales and Profit-7* from your sample files folder (if it isn't already open).

2   Type the words **USA Sales** into cell A15 and **European Sales** into cell A16.

The text *European Sales* may have spilled over into column B if column A isn't wide enough to contain it.

3   If necessary, re-size column A so that it is wide enough for the words *European Sales* to fit within the column.

You learned how to do this in: *Lesson 2-9: Re-size rows and columns.*

	A
15	USA Sales
16	European Sales

4   Click into cell B15 and type **=S** into the cell.

Something amazing happens:

15	USA Sales	=S
16	European Sales	Functions
17		SEARCH
18		
19		SEC

A list appears showing every function in the Excel function library beginning with S. This feature is called *Formula AutoComplete* (if AutoComplete didn't display as expected see the facing-page sidebar).

You've already encountered the SUM(), AVERAGE() and MAX() functions courtesy of AutoSum.

You may be pleased (or dismayed) to know that there are over 300 functions in the Excel function library. The good news is that most untrained Excel users only ever get to understand SUM() and AVERAGE()!

When you typed **=S** Excel listed all functions beginning with S.

5   Continue typing: **=SU**

Notice that the list now only shows functions beginning with SU and look… there's the *SUM()* function that you need, three down in the list.

You could simply click on it with the mouse, but let's work like an Excel pro and do it with the keyboard.

6   Press the **<Down Arrow>** key to move the cursor over the SUM function.

7   Complete the formula to display the syntax box.

Complete the formula by pressing the **<Tab>** key.

Alternatively, type **M(** to finish the formula manually.

note

Enabling and disabling AutoComplete

As with so many other features, Microsoft allows you to turn this very useful feature off.

You'd never want to do this, but you may work on a machine that has had Formula AutoComplete switched off and you need to turn it on again.

Click:
🍎→Excel→Preferences→ AutoComplete

…and make sure that the *Use AutoComplete* box is checked.

note

The syntax box

The syntax box tells you which arguments (sometimes called parameters) the function needs.

SUM(**number1**, [number2], …)

The first argument has no square brackets, meaning that you can't leave it out.

The second argument (shown in square brackets) is optional.

The third argument is an ellipsis (a row of three dots). This means that you could continue with more arguments such as [number3], [number4] etc.

For such a simple function as SUM() the syntax box is hardly needed, but later you'll encounter functions that require several arguments and then the syntax box will be invaluable.

15	USA Sales	=SUM()
16	European Sales	SUM(**number1**, [number2], …)
17		

Notice that a little box has appeared beneath the function. This box displays the *Syntax* of the SUM function (see sidebar for more information).

8   Select the cells that you need to sum (cells B4:B5) with the mouse or keyboard.

If you want to be a real pro you should select them with the keyboard. To do this:

1. Press the **<Up Arrow>** key repeatedly until you reach cell B4.

2. Hold down the **<Shift>** key and press the **<Down Arrow>** key once to select cells B4:B5.

3. Press the **<Enter>** key.

    The total USA sales are displayed in cell B15.

	A	B
15	USA Sales	64,000

If you typed the formula in manually, you might notice that Excel automatically added a closing bracket when you pressed the <Enter> key (see sidebar facing page).

9   Use the same technique to create a SUM() function in cell B16 to show the total European sales (cells B6:B8).

1. Click in cell B16.

2. Type **=SU**

3. Press the **<Down Arrow>** key to move the cursor over the SUM function.

4. Press the **<Tab>** key to automatically enter the SUM function into cell B16.

5. Select the range B6:B8.

6. Press the **<Enter>** key.

B16		× ✓	*fx*	=SUM(B6:B8)		
	A	B	C	D	E
15	USA Sales	64,000			
16	Europea ⚠ es	65,000			
17					

The formula should now be: **=SUM(B6:B8)**

10   Save your work as *First Quarter Sales and Profit-8.*

Lesson 2-14: Use AutoFill for text and numeric series

1 Open *First Quarter Sales and Profit-8* from your sample files folder (if it isn't already open).

2 Delete the text **Feb** and **Mar** from cells C3:D3.

Select cells C3:D3 and then press the **<Delete>** key on your keyboard.

3 Make B3 the active cell

Click once inside cell B3. Notice that there is a green border around the cell and a spot on the bottom right-hand corner. This is the AutoFill handle. If you don't see it, refer to the sidebar.

note

If you don't see the AutoFill handle somebody has disabled AutoFill

It's almost certain that AutoFill will be enabled on any computer that you work on. It is such a useful feature that you wouldn't want to disable it.

If you don't see the AutoFill handle (the black spot on the bottom right hand corner of the active cell) it's because somebody has switched AutoFill off.

To bring it back, click:

→Excel→Preferences→Edit

…and make sure that the *Allow fill handle and cell drag-and-drop* box is checked.

4 Hover over the AutoFill handle with your mouse until the cursor shape changes to a black cross.

Many of my students have great difficulty with this when they try it for the first time.

- You don't want the hand: – that would move the cell.

- You don't want the white cross: – that would select the cell.

- You want the black cross: ✚ – the AutoFill cursor.

5 When the black cross cursor is visible, hold down the mouse button and drag your mouse to the right to AutoFill the other months: **Feb** and **Mar**.

Notice the tip that appears as you drag, previewing the month that will appear in each cell.

When you release the mouse button, the name of each month appears in cells C3 and D3.

6 Type: **Monday** into cell A18 and AutoFill down to cell A24 to show the days of the week.

(If you are not using an English language version of Excel you will need to type **Monday** in your own language).

First Quarter Sales and Profit-8

7   In cell B18 type the number **1** and in cell B19 type the number **2**.
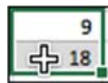
8   Select cells B18 and B19.
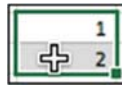
9   AutoFill down to B24 to create sequential numbers:

	A	B
18	Monday	1
19	Tuesday	2
20	Wednesday	3

10   In cell C18 type **9** and in cell C19 type **18**.

11   Select cells C18 and C19.

12   AutoFill down to B24 to create the nine times table.

	A	B	C
18	Monday	1	9
19	Tuesday	2	18
20	Wednesday	3	27

13   Use AutoFill to create sequential dates.

1.   Type **01-Jan-16** into cell D18.

2.   Type **02-Jan-16** into cell D19.

3.   Select cells D18:D19.

4.   AutoFill down to D24 to create sequential dates.

14   Use AutoFill to quickly copy text.

Sometimes you will want to duplicate the value from one cell into many others to the right of, left of, beneath, or above the active cell.

When a cell containing text is the active cell and it isn't defined as a *fill series* (the built-in fill series are days of the week and months of the year), AutoFill will simply duplicate the contents of the cell.

Type the text **Adjusted** into cell E18 and then AutoFill it down as far as cell E24.

The same text is now shown in each of the cells:

	A	B	C	D	E
18	Monday	1	9	01-Jan-16	Adjusted
19	Tuesday	2	18	02-Jan-16	Adjusted
20	Wednesday	3	27	03-Jan-16	Adjusted
21	Thursday	4	36	04-Jan-16	Adjusted
22	Friday	5	45	05-Jan-16	Adjusted
23	Saturday	6	54	06-Jan-16	Adjusted
24	Sunday	7	63	07-Jan-16	Adjusted

15   Save your work as *First Quarter Sales and Profit-9*.

Lesson 2-15: Use AutoFill to adjust formulas

AutoFill can save you a lot of time when extending or copying text and number sequences. But the story's not over yet.

AutoFill's ability to copy and adjust formulas is one of the most powerful tools in Excel's impressive toolbox.

1   Open *First Quarter Sales and Profit-9* from your sample files folder (if it isn't already open).

2   Consider the formula in cell B9.

Click onto cell B9 and view the formula displayed in the formula bar (the formula bar is at the top right of the screenshot below).

B9		fx	=SUM(B4:B8)		

	A	B	C	D	E	F	G
1	Sales and Profit Report - First Quarter 2016				**Formula Bar**		
2							
3		Jan	Feb	Mar	Average	Maximum	
4	New York	22,000	29,000	19,000	23,333	29,000	
5	Los Angeles	42,000	39,000	43,000			
6	London	18,000	20,000	22,000			
7	Paris	35,000	26,000	31,000			
8	Munich	12,000	15,000	13,000			
9	Sales	129,000					

The formula is *=SUM(B4:B8)*. AutoSum created it for you in: *Lesson 2-3: Use AutoSum to quickly calculate totals*. The formula uses the SUM() function to add together the values in the range B4:B8.

Think about the formula that would work in cell C9 (the total sales for February). It would be*: =SUM(C4:C8).* Similarly the formula that would work in cell D9 (the total sales for March) would be *=SUM(D4:D8).*

As you move to the right, all that is needed is to increment the letter for each cell reference in the formula and you'll get the right answer every time.

AutoFill is very clever and realizes this. When you AutoFill a cell containing a formula to the right, AutoFill increments the letters in each cell reference.

Most of the time that is exactly what you want.

There's also a way to fine-tune the way in which AutoFill adjusts cell references, allowing you to implement some more advanced AutoFill techniques. While this is beyond the scope of this *Basic Skills* book, it is covered in-depth in the *Essential Skills* book in this series (in *Lesson 3 11: Understand absolute and relative cell references*, and *Lesson 3 12: Understand mixed cell references*).

3   AutoFill cell B9 to the right as far as cell D9.

You learned how to do this in: *Lesson 2-14: Use AutoFill for text and numeric series.*

First Quarter Sales and Profit-9

You may see a row of hashes in cell C9 and/or D9. This is because the value may be too wide to fit in the cell. If this is the case, AutoFit the column using the skills learned in: *Lesson 2-9: Re-size rows and columns.*

The correct answers for *Feb* and *Mar* sales are shown on the worksheet. Click on the *Feb* total cell (C9) and look at the formula in the formula bar.

C9		×	✓	fx	=SUM(C4:C8)	
	A	B	C	D	E	
1	Sales and Profit Report - First Quarter 2016					
2						
3		Jan	Feb	Mar	Average	
4	New York	22,000	29,000	19,000	23,333	
5	Los Angeles	42,000	39,000	43,000		
6	London	18,000	20,000	22,000		
7	Paris	35,000	26,000	31,000		
8	Munich	12,000	15,000	13,000		
9	Sales	129,000	129,000	128,000		

You can see that AutoFill has done its job perfectly, creating the sum of the values in cells C4:C8. The five branches have sold exactly the same amount in both January and February, but a little less in March.

4 Consider the formula in cell E4.

Click onto cell E4 and view the formula displayed in the formula bar.

E4		×	✓	fx	=AVERAGE(B4:D4)	
	A	B	C	D	E	
1	Sales and Profit Report - First Quarter 2016					
2						
3		Jan	Feb	Mar	Average	
4	New York	22,000	29,000	19,000	23,333	
5	Los Angeles	42,000	39,000	43,000		
6	London	18,000	20,000	22,000		

The formula is *=AVERAGE(B4:D4)*. AutoSum created it for you in: *Lesson 2-11: Use AutoSum to quickly calculate averages.*

Think about the formula that would work in cell E5 (the average sales for Los Angeles). It would be: *=AVERAGE(B5:D5).* Similarly the formula that would work in cell E6 (the average sales for London) would be *=AVERAGE(B6:D6).*

As you move downward, all that is needed is to increment the number for each cell reference in the formula. This is exactly what AutoFill will do.

E	F
Average	Maximum
23,333	29,000
41,333	43,000
20,000	22,000
30,667	35,000
13,333	15,000

5 AutoFill cell E4 down to E8 to see the average sales for each branch.

6 AutoFill cell F4 down to F8 to view the maximum sales for each branch.

7 Save your work as *First Quarter Sales and Profit-10.*

Lesson 2-16: Use AutoFill options

Sometimes AutoFill begins to misbehave and actually gets in the way of efficient work by wrongly anticipating what you need.

1 Open *First Quarter Sales and Profit-10* from your sample files folder (If it isn't already open).

2 Populate cells F18 to F24 with sequential dates beginning with 1-Jan-16 using AutoFill.

  1. In cell F18, type the date: **1-Jan-16**

  2. AutoFill cell F18 down as far as cell F24.

    The cells are populated with sequential dates:

	A	B	C	D	E	F
18	Monday	1	9	01-Jan-16	Adjusted	01-Jan-16
19	Tuesday	2	18	02-Jan-16	Adjusted	02-Jan-16
20	Wednesday	3	27	03-Jan-16	Adjusted	03-Jan-16
21	Thursday	4	36	04-Jan-16	Adjusted	04-Jan-16
22	Friday	5	45	05-Jan-16	Adjusted	05-Jan-16
23	Saturday	6	54	06-Jan-16	Adjusted	06-Jan-16
24	Sunday	7	63	07-Jan-16	Adjusted	07-Jan-16

3 Populate cells G18 to G24 with the date *31-Mar-16* using the AutoFill Smart Tag.

  1. In cell G18 type the date: **31-Mar-16**

  2. AutoFill down as far as cell G24.

    At some time, you'll need to add transaction dates to a worksheet and will have four or five entries with the same date.

    AutoFill is perfect for eliminating the need to re-type the date for each transaction, but its insistence upon incrementing the date every time could be very frustrating.

    Fortunately, you can change the default behavior.

  3. Click the Auto Fill Options Smart Tag ⊞ at the bottom right corner of the filled cells.
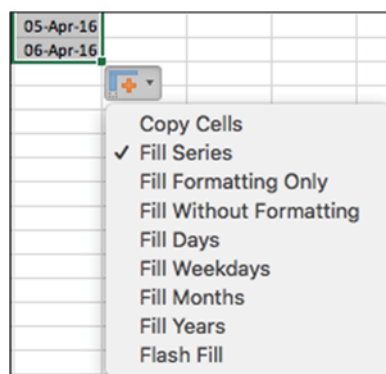
4. Click *Copy Cells* to tell AutoFill not to increment the date.

4 Understand AutoFill options.

If you later progress to the *Essential Skills* book in this series, the *Fill Formatting* option is covered in-depth in: *Session Four: Making Your Worksheets Look Professional*.

Here's what the other options will do:

Copy Cells	Fill Series	Fill Days	Fill Weekdays	Fill Months	Fill Years
This is what you just did. The first cell is copied to the other cells.	The default for dates that include the day. The date increments by one day at a time.	The date increments by one day at a time.	Because 1st April 2016 was a Friday, the weekend days are omitted, and the series jumps from 1st April to 4th April.	Normally this would show the same day number for each month. In this example, there are only 30 days in three of the months so 30th is shown instead of 31st.	The same calendar day is shown for each subsequent year.
31-Mar-16 31-Mar-16 31-Mar-16 31-Mar-16 31-Mar-16 31-Mar-16 31-Mar-16	31-Mar-16 01-Apr-16 02-Apr-16 03-Apr-16 04-Apr-16 05-Apr-16 06-Apr-16	31-Mar-16 01-Apr-16 02-Apr-16 03-Apr-16 04-Apr-16 05-Apr-16 06-Apr-16	31-Mar-16 01-Apr-16 04-Apr-16 05-Apr-16 06-Apr-16 07-Apr-16 08-Apr-16	31-Mar-16 30-Apr-16 31-May-16 30-Jun-16 31-Jul-16 31-Aug-16 30-Sep-16	31-Mar-16 31-Mar-17 31-Mar-18 31-Mar-19 31-Mar-20 31-Mar-21 31-Mar-22

note

AutoFill bug

You may encounter a bug that takes you back to the Excel start screen when you try to AutoFill using the right-click menu.

This bug affects Excel version 15.37 and should be fixed in a future update.

Copy Cells
Fill Series
Fill Formatting Only
Fill Without Formatting

Fill Days
Fill Weekdays
Fill Months
Fill Years

Linear Trend
Growth Trend

Flash Fill
Series...

You'll also notice the *Flash Fill* option. Flash Fill is a new feature in Excel 2019 for Mac, and you'll look at it in depth later in this session.

5 Populate cells F18 to F24 with sequential dates using a right-click AutoFill.

1. Click on cell F18 to make it the active cell.

2. AutoFill down to cell F24, but this time hold down the right mouse button instead of the left mouse button.

   When you release the mouse button, you are instantly presented with the AutoFill options (see sidebar).

   This method is preferred to the Smart Tag method because it is faster (one click instead of two).

3. Click: *Fill Series* or *Fill Days.*

   In this example *Fill Series* and *Fill Days* produce exactly the same result.

6 Save your work as *First Quarter Sales and Profit-11.*

Lesson 2-17: Speed up your AutoFills and create a custom fill series

In this lesson you're going to learn some advanced AutoFill techniques that will massively speed up your efficient use of the AutoFill feature.

1 Open *First Quarter Sales and Profit-11* (if it isn't already open).

2 Use an AutoFill double-click to populate cells G19:G24 with sequential dates.

1. Delete the contents of cells G18:G24.

2. Type: **31-Mar-16** into cell G18.

	A	B	C	D	E	F	G
18	Monday	1	9	01-Jan-16	Adjusted	01-Jan-16	31-Mar-16
19	Tuesday	2	18	02-Jan-16	Adjusted	02-Jan-16	
20	Wednesday	3	27	03-Jan-16	Adjusted	03-Jan-16	
21	Thursday	4	36	04-Jan-16	Adjusted	04-Jan-16	
22	Friday	5	45	05-Jan-16	Adjusted	05-Jan-16	
23	Saturday	6	54	06-Jan-16	Adjusted	06-Jan-16	
24	Sunday	7	63	07-Jan-16	Adjusted	07-Jan-16	

3. Double click the AutoFill handle to automatically fill cells G19:G24.

   Hover over the AutoFill handle (the black spot at the bottom right hand corner of cell G18). When you are sure that you have the correct black cross cursor shape, double click to automatically fill down to the end of the range.

	A	B	C	D	E	F	G
18	Monday	1	9	01-Jan-16	Adjusted	01-Jan-16	31-Mar-16
19	Tuesday	2	18	02-Jan-16	Adjusted	02-Jan-16	01-Apr-16
20	Wednesday	3	27	03-Jan-16	Adjusted	03-Jan-16	02-Apr-16
21	Thursday	4	36	04-Jan-16	Adjusted	04-Jan-16	03-Apr-16
22	Friday	5	45	05-Jan-16	Adjusted	05-Jan-16	04-Apr-16
23	Saturday	6	54	06-Jan-16	Adjusted	06-Jan-16	05-Apr-16
24	Sunday	7	63	07-Jan-16	Adjusted	07-Jan-16	06-Apr-16

3 Create a custom list containing the values: *North, South, East* and *West.*

1. Click: ⌘→Excel→Preferences→Custom Lists.

   The *Custom Lists* dialog appears.

2. Click in the *List entries* box and add four custom list entries: **North, South, East** and **West**, pressing the **<Enter>** key between each item.

First Quarter Sales and Profit-11
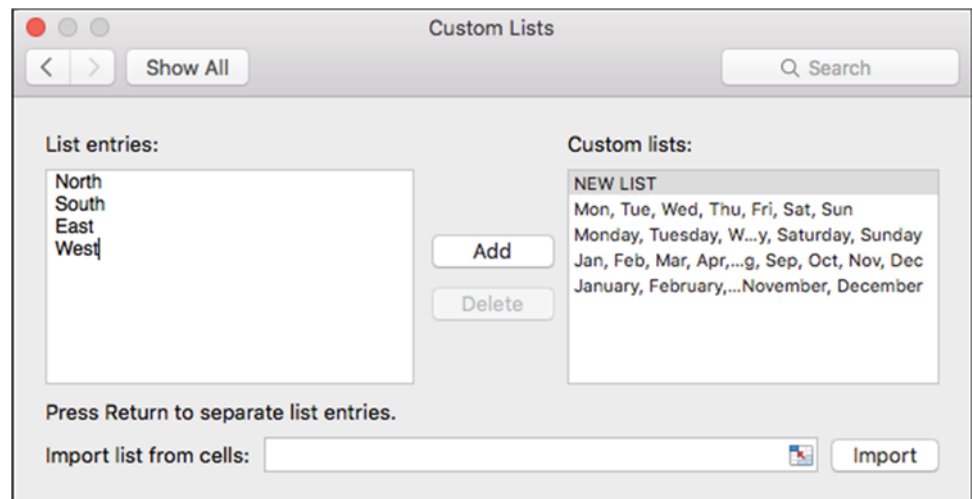
3. Click the *Add* button to add the new custom list.

4. Click the *Close* button to close the *Custom Lists* dialog.

4   Use the newly-created custom list.

Type **North** into any cell and AutoFill down.

As you AutoFill, the custom list entries appear in the worksheet.

5   Delete the North, South, East, West… cells from the worksheet.

6   Save your work as *First Quarter Sales and Profit-12.*

note

Excel can calculate a linear series when the step values of cells are not equal

Excel calculates a linear series (AutoFill also calls this a *fill series*) using this formula:

Start Value + Step Value

Sometimes you may need to produce linear series values from a series of numbers that have different step values. For example, consider this range:

	A	B
2	Value	Step Value
3	1	
4	2.1	1.1
5	2.9	0.8
6	4.1	2.3

In this case Excel will use a more complex mathematical operation (called the *least-squares algorithm*) to determine the correct step value to use. In the above example, Excel would calculate a step value of 1.01.

Rabbit Population

Lesson 2-18: Understand linear and exponential series

Linear series

In: *Lesson 2-14: Use AutoFill for text and numeric series*, you used AutoFill's *Fill Series* method to automatically create these numeric series:

	A	B	C
18	Monday	1	9
19	Tuesday	2	18
20	Wednesday	3	27

These are both examples of *Linear* series.

Imagine that you had originally selected cells B1:B2 before AutoFilling column B:

	B
1	9
2	18
3	

To calculate a linear series Excel first identifies the *step value*. The linear series in column B has a *step value* of nine (18-9=9).

When you use AutoFill to *Fill Series*, Excel adds the *step value* to the *start value* (the number shown in the previous cell).

After you have AutoFilled down to cell B3, the value shown in cell B3 will thus be twenty-seven (18 (the start value) +9 (the step value) = 27)

This is an example of a very simple linear series. Excel is also able to calculate a linear series even when the step values of the selected cells are not equal (see sidebar).

Exponential (or Growth) series

An exponential series is calculated by *multiplying* (rather than adding) the *start value* by the *step value*. This type of series is usually referred to as an *exponential* (rather than linear) series. Excel also uses the term *growth series* as a synonym for *exponential series* (see sidebar).

Here's an example:

- A truly excellent restaurant opens in town. On the first day they only have one customer but the customer is so delighted by the food, service and value that the customer tells two friends.

- The next day the two friends eat there and the restaurant has two diners.

- The two friends are also so pleased with their experience that they each also tell two friends. On the third day the restaurant has four diners.

note

Here's how you could have used the Ribbon to complete this lesson:

1. Enter the value **200** into cell B4.

2. Select cells B4:B51.

3. Click: Home→Editing→ Fill→Series…

The *Series* dialog appears.

4. Enter the following values into the *Series* dialog:

Note that the value: **1.2** is used because an exponential (growth) series multiplies each *start value* by the *step value.*

trivia

According to an old legend, the inventor of the game of Chess presented his new game to a powerful king. The king was so pleased with the game that he offered the inventor any reasonable reward.

The inventor asked for one grain of rice for the first square on the chessboard, two for the second, four for the third… and so on for each square on the chessboard.

The king thought the inventor was foolish to ask for such a simple gift. Much later he found that there was not enough rice in the entire world to fulfil the inventor's request.

With the Excel skills you have learned in this lesson, you should easily be able to model the King's dilemma and discover exactly how many grains of rice would have been needed (about 18.5 Quintillion).

You can see that the restaurant owner might expect that this trend will continue and that each day the number of diners will double (in Excel's terminology, the *step value* is 2). Eventually, of course, the restaurant will become full and the trend will have to end (in Excel's terminology the number of seats in the restaurant is the *stop value*).

In this lesson you will model this type of exponential series.

1 Open *Rabbit Population* from your sample files folder.

2 If the rabbit population of an island increases at the rate of 20% per month, use an exponential progression to calculate how a newly introduced community of 200 rabbits will grow in four years.

1. Type the value: **200** into cell B4 to set the rabbit population at the beginning of the period.

2. Type the value: **240** into cell B5 to set the rabbit population after one month.

3. Select the range B4:B5.

Hold down the right-click mouse button on the AutoFill handle at the bottom-right of the selected range and drag down to AutoFill to cell B51.

4. Click *Growth Trend* on the shortcut menu. Note that this is the shortcut menu's synonym for: *Exponential Series*.
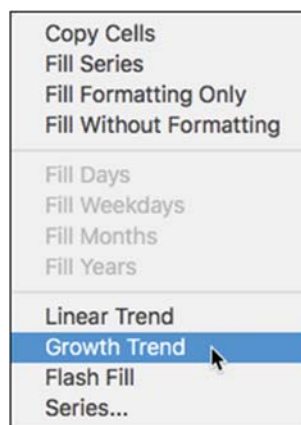
5. After four years (48 months) the 200 rabbits will have grown to a population of a little over a million.

3 Save your work as *Rabbit Population-1.*

Lesson 2-19: Use Flash Fill to split text

Here are two examples of international telephone numbers.

+44 (0)113-4960227 (a UK telephone number)
+356 (0)2138-3393 (a Maltese telephone number)

The *country code* (or international dialing code) is shown as a + symbol followed by one or more numbers. The *NDD* (National Direct Dialing prefix) is shown in brackets. This is the access code used to make a call within the relevant country but is omitted when calling from outside the country. The *Area Code* consists of the numbers after the closing bracket but before the hyphen.

In this lesson, you'll use *Flash Fill* to split telephone numbers into the *Country Code, Area Code* and *Phone Number* like this:

	A	B	C	D	E
3	Company	Telephone	Country Code	Area Code	Phone Number
4	Books A Million	+44 (0)113-4960227	+44	113	4960227
5	Maltese Books	+356 (0)2138-3393	+356	2138	3393
6	Bargain Bookstore	+44 (0)115-4960498	+44	115	4960498

In Mac Excel versions prior to Excel 2019 you had to use some very complex formulas to split this type of text. With the new *Flash Fill* feature, you can achieve the same result in seconds.

1 Open *Phone Book-1* from your sample files folder.

2 Extract the *Country Code* from the telephone number in column B and place it into column C.

If you were to type **+44** into cell C4, Excel would interpret it as a positive number and display the result as 44 (without the plus sign).

In order to signal to Excel that you want the plus sign to be displayed, you will need to indicate that +44 should be regarded as text rather than as a number.

You discovered the technique for doing this in: *Lesson 2-1: Enter text and numbers into a worksheet.*

If an apostrophe is placed before a number, Excel will regard it as text.

1. Type: **'+44** into cell C4 (an apostrophe followed by **+44**).

2. Press: **<Enter>**

3. Making sure that the active cell is in one of the cells that will be Flash Filled (i.e. anywhere in the range C3:C18), click:

Home→Editing→Fill→Flash Fill

You can also find Flash Fill on the Data tab, under:

Data→Data Tools→Flash Fill

There are two ways to solve the problem posed in this lesson:

1. Use Flash Fill

This is the method used in this lesson. Flash Fill provides a fast and simple solution.

2. Use complex formulas

Only expert Excel users could construct the complex formulas required to split the telephone numbers contained in the sample file without the use of Flash Fill.

In the *Expert Skills* book in this series you will solve exactly the same problem presented in this lesson without Flash Fill.

Complex formulas are used instead, to provide a formula-based solution.

Advantage of a formula-based solution

The results of a Flash Fill do not automatically update when the source data changes.

This means that if you changed the telephone number in column B you would then need to Flash Fill three times to update columns C, D and E.

Formula results automatically update whenever the source cells change.

This means that if you changed the telephone number in the formula-based solution, the *Country Code, Area Code* and *Phone Number* would automatically update.

Alternatively, you could also use the shortcut keys: **<Ctrl>+<E>** to Flash Fill. **<Cmd>+<E>** will not have the same effect, as the Mac version of Excel uses **<Cmd>+<E>** as the shortcut to center a cell.

The country code is extracted into the remaining cells in column C.

	A	B	C
3	Company	Telephone	Country Code
4	Books A Million	+44 (0)113-4960227	+44
5	Maltese Books	+356 (0)2138-3393	+356
6	Bargain Bookstore	+44 (0)115-4960498	+44

Notice that Excel has placed a green triangle in the top-left corner of each cell. Excel thinks you may have made an error but, of course, the value is fine. If you want to remove the green triangles, use the method you learned in: *Lesson 2-4: Select a range of cells and understand Smart Tags.*

3   Extract the *Area Code* from the telephone number in column B and place it into column D.

Use the same method as you did for the country code. The first area code you need to type is: '**113**

Even though there is no plus sign, it is still useful to include the apostrophe as it will prevent Excel from re-formatting numbers (see next step for more on this).

4   Extract the *Phone Number* from the telephone number in column B and place it into column E.

Use the same method as you did for the country code. The first telephone number is: '**4960227**

In this case you must use a leading apostrophe to prevent Excel from re-formatting large numbers. For example, the telephone number: *20180948* would be displayed as *2E+07* if you didn't include the apostrophe.

The *Country Code, Area Code* and *Phone Number* are now extracted for every international telephone number:

	A	B	C	D	E
3	Company	Telephone	Country Code	Area Code	Phone Number
4	Books A Million	+44 (0)113-4960227	+44	113	4960227
5	Maltese Books	+356 (0)2138-3393	+356	2138	3393
6	Bargain Bookstore	+44 (0)115-4960498	+44	115	4960498

5   Save your work as *Phone Book-2.*

note

Flash Fill doesn't understand mathematics

Consider this problem:

	A	B
1	100	101
2	1120	1121
3	180	
4	149	

You could be forgiven for thinking that Flash Fill could populate cells B3 and B4 with the numbers 181 and 150. In order to produce this result Flash Fill would have to detect a mathematical relationship between the numbers in columns A and B.

Because Flash Fill doesn't understand mathematics, it will always see the problem as a textual one and will produce this result:

	A	B
1	100	101
2	1120	1121
3	180	181
4	149	141

Flash Fill has used the logic "replace the last character displayed in column A with 1" and not "Add one to the value displayed in column A".

Lesson 2-20: Use multiple example Flash Fill to concatenate text

Understand concatenation

Here is an example of splitting text:

	A	B	C
3	Name	First Name	Last Name
4	Jessica Sagan	Jessica	Sagan
5	Stephen Bell	Stephen	Bell

In the above example, the text: *Jessica Sagan* was split into two separate words: *Jessica* and *Sagan.* You saw how to do this using Flash Fill in: *Lesson 2-19: Use Flash Fill to split text*

Concatenation is exactly the opposite of splitting. The two separate words *Jessica* and *Sagan* can be concatenated to produce the single word: *Jessica Sagan.* This is an example of very simple concatenation.

In this lesson, you'll perform some very advanced concatenation using *Flash Fill*.

1 Open *Client Names-1* from your sample files folder.

This workbook contains a list of very inconsistently formatted client names:

	A	B	C	D
3	Last	Middle	First	
4	Sagan	Elizabeth	Jessica	
5	Bell	p	Stephen	
6	jennings		John	

You want to clean up this data so that client names are consistently formatted like this:

	A	B	C	D
3	Last	Middle	First	Formatted Name
4	Sagan	Elizabeth	Jessica	Sagan, Jessica E.
5	Bell	p	Stephen	Bell, Stephen P.
6	jennings		John	Jennings, John
7	Simpson	Jane	Meryl	Simpson, Meryl J.
8	hawking		Alfred	Hawking, Alfred
9	Ashe	m	Lucille	Ashe, Lucille M.

For Flash Fill to automate this task you will need to tell Flash Fill what is needed by providing more than one example.

2 Type: **Formatted Name** into cell D3 and bold face the text.

(Excel will probably bold-face the text automatically).

It is important that the header text in row 3 is bold faced.

When Flash Fill sees different formatting in the first row the row is assumed to be a header row. Flash Fill then excludes the value in the header row from its logic, providing more reliable results.

3 Provide a single example result in cell D4.

Type: **Sagan, Jessica E.** into cell D4.

4 Flash Fill cells D5:D9 based upon the example result in cell D4.

	A	B	C	D
3	**Last**	**Middle**	**First**	**Formatted Name**
4	Sagan	Elizabeth	Jessica	Sagan, Jessica E.
5	Bell	p	Stephen	Bell, Stephen T.
6	jennings		John	jennings, John O.
7	Simpson	Jane	Meryl	Simpson, Meryl E.
8	hawking		Alfred	hawking, Alfred L.
9	Ashe	m	Lucille	Ashe, Lucille U.

You learned how to do this in: *Lesson 2-19: Use Flash Fill to split text.*

Excel completes the task but the results are not what you wanted (see sidebar).

With only one example, Flash Fill has completely misunderstood the requirement.

5 Provide two example results in cells D4 and D5.

1. Delete the names in cells D5:D9.

2. Provide another example of the correct result (in cell D5).

	A	B	C	D
3	**Last**	**Middle**	**First**	**Formatted Name**
4	Sagan	Elizabeth	Jessica	Sagan, Jessica E.
5	Bell	p	Stephen	Bell, Stephen P.
6	jennings		John	

6 Flash Fill cells D6:D9 based upon the example results in cells D4 and D5.

1. Select cells D4:D9.

2. Click: Home→Editing→Fill→Flash Fill.

This time Flash Fill has done a better job (see sidebar).

Notice the two blank results (for *John Jennings* and *Alfred Hawking*).

	A	B	C	D
3	**Last**	**Middle**	**First**	**Formatted Name**
4	Sagan	Elizabeth	Jessica	Sagan, Jessica E.
5	Bell	p	Stephen	Bell, Stephen P.
6	jennings		John	
7	Simpson	Jane	Meryl	Simpson, Meryl J.
8	hawking		Alfred	
9	Ashe	m	Lucille	Ashe, Lucille M.

Flash Fill doesn't yet understand how to treat clients without a middle name. The blank spaces are Flash Fill's way of asking you for yet another example.

7 Provide another example result in cell D6.

1. Type: **Jennings, John** into cell D6.

2. Press the **<Enter>** key.

3. Select cells D4:D9.

4. Click: Home→Editing→Fill→Flash Fill.

	A	B	C	D
3	**Last**	**Middle**	**First**	**Formatted Name**
4	Sagan	Elizabeth	Jessica	Sagan, Jessica E.
5	Bell	p	Stephen	Bell, Stephen P.
6	jennings		John	Jennings, John
7	Simpson	Jane	Meryl	Simpson, Meryl J.
8	hawking		Alfred	Hawking, Alfred
9	Ashe	m	Lucille	Ashe, Lucille M.

This time Flash Fill has completed the task successfully (see sidebar).

8 Save your work as *Client Names-2.*

note

Flash Fill in Excel for Windows

While Excel 2019 is the first Mac version of Excel to include Flash Fill, this feature has been available in the Windows version of Excel since Excel 2013.

The Windows version of Excel also includes an automatic Flash Fill feature, which automatically tries to apply Flash Fill features 'as you type'.

Lesson 2-21: Use Flash Fill to solve common problems

Flash Fill (introduced to the Mac version of Excel in Excel 2019) is one of Excel's most useful features. It isn't possible to over-state how useful this tool is. I find myself using Flash Fill almost every day to solve a huge number of different problems.

This lesson gives examples of many everyday tasks that I have found can be quickly and simply completed using Flash Fill. I've also included all of the examples in the sample file: *Flash Fill Examples.*

In the following examples, Flash Fill filled the shaded cells.

Split text

Full Name	First Name	Last Name
Jessica Elizabeth Sagan	Jessica	Sagan
Stephen Bell	Stephen	Bell
John Paul Jennings	John	Jennings

Extract initials from names

Name	Initials
Jessica Elizabeth Sagan	JES
Stephen Bell	SB
John Paul Jennings	JPJ

Remove title from names

Full Name	Short Name
Miss Jessica Elizabeth Sagan	Jessica Sagan
Mr Stephen Bell	Stephen Bell
Mr John Paul Jennings	John Jennings

Add commas (a useful name format for alphabetical sorting)

Name	Sort Name
Jessica Elizabeth Sagan	Sagan, Jessica
Stephen Bell	Bell, Stephen
John Paul Jennings	Jennings, John

Concatenate text

First Name	Middle Name	Last Name	Full Name
Jessica	Elizabeth	Sagan	Jessica Elizabeth Sagan
Stephen		Bell	Stephen Bell
John	Paul	Jennings	John Paul Jennings

Concatenate text and insert extra text

First Name	Middle Name	Last Name	Full Name
Jessica	Elizabeth	Sagan	First Name: Jessica, Last Name: Sagan
Stephen		Bell	First Name: Stephen, Last Name: Bell
John	Paul	Jennings	First Name: John, Last Name: Jennings

Flash Fill Examples

Change capitalization

Mixed Case	Title Case
jessica elizabeth sagan	Jessica Elizabeth Sagan
stephen Bell	Stephen Bell
john Paul jennings	John Paul Jennings

Extract the day, month or year from a date

In all the date-based examples note that the *Date* column is formatted as a date. If you progress to the *Essential Skills* book in this series, you will learn how to format cells as dates in: *Session Four: Making Your Worksheets Look Professional.*

Date	Day	Date	Month	Date	Year
19th January 2013	19	19th January 2013	January	19th January 2013	2013
5th August 1967	5	5th August 1967	August	5th August 1967	1967
20th September 1999	20	20th September 1999	September	20th September 1999	1999

Extract the day/month from a date

Date	Day/Month
19th January 2013	19th January
5th August 1967	5th August
20th September 1999	20th September

Extract domain names from e-mail addresses

E-mail address	Domain
Mary@QuiteContrary.com	QuiteContrary.com
Humpty@Dumpty.com	Dumpty.com
Jack@Nimble.com	Nimble.com

Format telephone numbers

Name	Tel (unformatted)	Tel (formatted)
Books A Million	1134960227	(113) 496-0227
Bargain Bookstore	1154960498	(115) 496-0498
Books for Less	1164960593	(116) 496-0593

note

Can my mouse be used to zoom?

The first Apple mouse to include a scroll wheel was the Mighty Mouse, first released in 2005. If you are using an Apple mouse from before 2005, you won't be able to zoom in and out using the mouse.

Apple's most recent mouse (the Magic Mouse) does not include a scroll wheel, but instead allows you to scroll by holding your finger on the mouse's surface and then moving it in the direction that you wish to scroll.

Any other mouse that has a scroll wheel should allow you to zoom as shown in this lesson. You do not need to use an Apple mouse.

note

If mouse zooming doesn't work

You might find that mouse zooming doesn't work, even though you have a Magic Mouse or a mouse with a scroll wheel. This may be due to a bug in Excel for Mac.

Excel sometimes gets confused over whether you are trying to scroll within the workbook or trying to scroll through items in menus on the Ribbon.

If this happens to you, you should be able to fix the problem by quitting and restarting Excel.

You saw how to do this in: *Lesson 1-5: Minimize, re-size, move and close the Excel window.*

First Quarter Sales and Profit-12

Lesson 2-22: Use the zoom control

Zooming is used to magnify or reduce the worksheet. If you have a lot of rows in a worksheet and have good eyes, you might want to zoom out sometimes to see more of the worksheet on one screen.

1 Open *First Quarter Sales and Profit-12* from your sample files folder.

2 Zoom in and out of the worksheet using the mouse.

The fastest way to zoom a worksheet is by using the mouse, if your mouse has this ability (see sidebar).

To zoom using the mouse, hold down the **<Ctrl>** key on the keyboard and roll the mouse wheel to zoom in and out.

3 Zoom in and out of a worksheet using the zoom control.

The zoom control is at the bottom right of your screen.

Click and drag on the zoom control slider to zoom in and out of your worksheet. You can also zoom by clicking the plus and minus buttons on either side of the Zoom control.
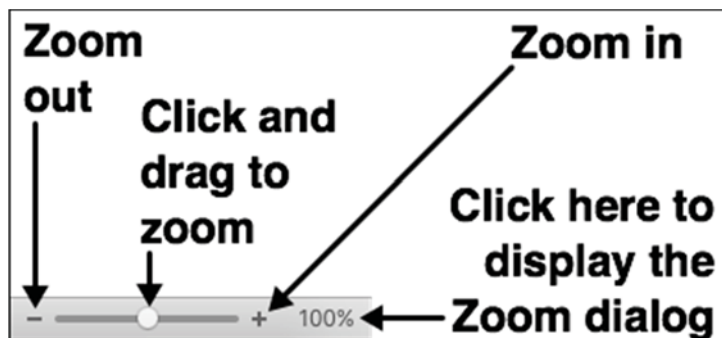
4 Use the Zoom dialog to make cells A3:D9 fill the screen.

1. Select cells A3:D9.

2. Click on the right hand side of the zoom bar.
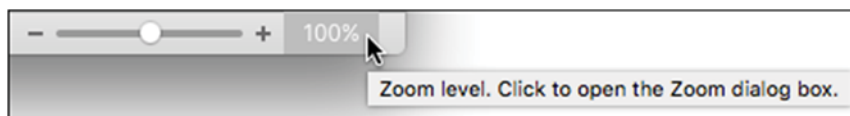
The *Zoom* dialog is displayed.

3. Select the *Fit Selection* option button.

4. Click the *OK* button.

The worksheet is zoomed so that the selected cells completely fill the screen.
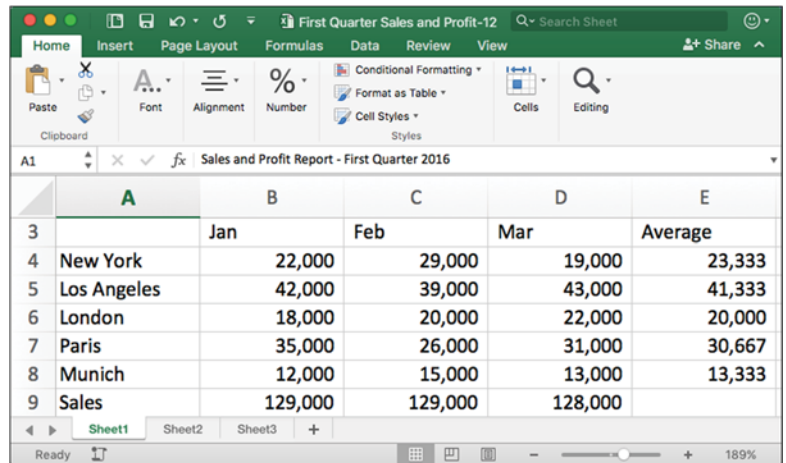
5 Zoom back to 100% using the Ribbon.

You'll probably find the zoom bar to be the quickest and most convenient way to zoom, but you can also zoom using the Ribbon.

Click: View→Zoom→Zoom to 100%.
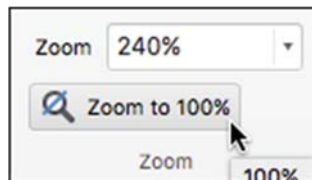
The screen is restored to normal size.

---

note

The Zoom dialog can also be accessed using the Menu Bar

You can also access the Zoom dialog by clicking:

→View→Zoom…

Lesson 2-23: Print out a worksheet

You aren't going to explore every option for preparing and printing a worksheet in this lesson. If you progress to the *Essential Skills* book in this series, you'll find a whole session dedicated to more advanced printing techniques in: *Session Seven: Printing Your Work.*

This lesson only aims to teach you the bare minimum skills you need to put your work onto paper.

1   Open *First Quarter Sales and Profit-12* from your sample files folder (if it isn't already open).

	A	B	C	D	E	F	G
1	Sales and Profit Report - First Quarter 2016						
2							
3		Jan	Feb	Mar	Average	Maximum	
4	New York	22,000	29,000	19,000	23,333	29,000	
5	Los Angeles	42,000	39,000	43,000	41,333	43,000	
6	London	18,000	20,000	22,000	20,000	22,000	
7	Paris	35,000	26,000	31,000	30,667	35,000	
8	Munich	12,000	15,000	13,000	13,333	15,000	
9	Sales	129,000	129,000	128,000			
10							
11	Costs	83,000					
12	Profit	46,000					
13	10% Bonus	4,600					
14							
15	USA Sales	64,000					
16	European Sales	65,000					
17							
18	Monday	1	9	01-Jan-16	Adjusted	01-Jan-16	31-Mar-16
19	Tuesday	2	18	02-Jan-16	Adjusted	02-Jan-16	01-Apr-16
20	Wednesday	3	27	03-Jan-16	Adjusted	03-Jan-16	02-Apr-16
21	Thursday	4	36	04-Jan-16	Adjusted	04-Jan-16	03-Apr-16
22	Friday	5	45	05-Jan-16	Adjusted	05-Jan-16	04-Apr-16
23	Saturday	6	54	06-Jan-16	Adjusted	06-Jan-16	05-Apr-16
24	Sunday	7	63	07-Jan-16	Adjusted	07-Jan-16	06-Apr-16

2   Click: →File→Print.

The *Print* dialog appears, showing a preview of how the document will print. By default, a simplified version of the dialog is shown.

3   Click *Show Details* to show the complete Print dialog.
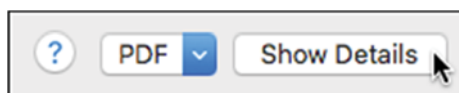
The complete dialog is shown, enabling you to access more printing options.

If the complete dialog is already visible, the *Show Details* button will be replaced by a *Hide Details* button.

First Quarter Sales and Profit-12

Preview of how the page will look when printed

Select Printer

Print

Printer:	hp LaserJet 2420 UPD PCL 6
Presets:	Default Settings
Copies:	1
Pages:	● All ○ From: 1 to: 1
Paper Size:	A4 — 210 by 297 mm
Orientation:	
	Excel
	☑ Collate pages
Print:	Active Sheets
Margins:	Normal Margins
	☐ Scale to fit: 1 pages wide by 1 pages tall

1 of 1

Move to a different page

Print Options

? PDF ⌄   Hide Details   Cancel   **Print**

Send the worksheet to the printer

4   Print the worksheet.

Click the *Print* button:

Print

The page is printed on the selected printer.

Blank page

Session 2: Exercise

1   Open a new blank workbook.

2   Use AutoFill to put the three months Jan, Feb, and Mar into cells A4:A6.

3   Using only the keyboard, add the following data:

	A	B	C	D	E
1	Profit Analysis				
2					
3		London	Paris	New York	Average
4	Jan	2,500	3,100	2,300	
5	Feb	2,200	2,700	2,600	
6	Mar	2,100	2,600	2,800	
7	Total				

4   Use AutoSum to compute London's total profit for Jan/Feb/Mar in cell B7.

5   Use AutoSum to compute the average January profit in cell E4.

6   Use AutoFill to extend the London total in cell B7 to the Paris and New York totals in cells C7 and D7.

7   Use AutoFill to extend the January average profit in cell E4 to the February and March average profits in cells E5 and E6.

8   Select all of column A and all of column E (at the same time) and bold face the values in them.

9   Select rows 3 and row 7 (at the same time) and bold face the values in them.

	A	B	C	D	E
1	**Profit Analysis**				
2					
3		**London**	**Paris**	**New York**	**Average**
4	**Jan**	2,500	3,100	2,300	**2,633**
5	**Feb**	2,200	2,700	2,600	**2,500**
6	**Mar**	2,100	2,600	2,800	**2,500**
7	**Total**	**6,800**	**8,400**	**7,700**	

10   Select cells B4:B6 and cells D4:D6 at the same time and then read the total London and New York sales figure for Jan, Feb and March from the summary information displayed on the status bar.

11   Select cells B4:D6 and zoom the selection so that these cells fill the screen.

12   Save your work as *Exercise2-End*.
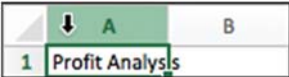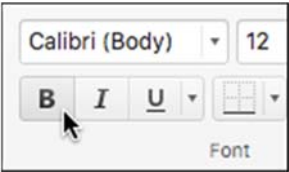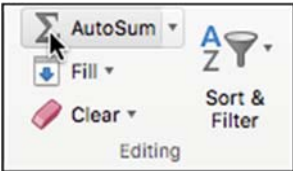
If you need help slide the page to the left

Blank page

Session 2: Exercise answers

These are the questions that students find the most difficult to answer:

Q 10	Q 8	Q 4	Q 2
1. Hover over the center of cell B4 so that you see the white cross cursor shape. 2. Click and drag down to cell B6. 3. Hold down the **<Cmd>** key. 4. Hover over cell D4 until you see the white cross cursor shape. 5. Click and drag down to cell D6. 6. Look at the status bar at the bottom right of the screen. This was covered in: *Lesson 2-7: Select non-contiguous cell ranges and view summary information.*	1. Click on the column A header. 2. Hold down the **<Cmd>** key. 3. Click on the column E header. 4. Click: Home→Font→Bold This was covered in: *Lesson 2-6: Select adjacent and non-adjacent rows and columns.*	1. Click in cell B7. 2. Click: Home→Editing→ AutoSum 3. Press the **<Enter>** key. This was covered in: *Lesson 2-3: Use AutoSum to quickly calculate totals.*	1. Type **Jan** into cell A4 and press the **<Enter>** key. 2. Click cell A4 once to make it the active cell. 3. Hover the mouse cursor over the bottom right corner of the cell until you see the black cross cursor shape. 4. Click and drag down to cell A6. This was covered in: *Lesson 2-14: Use AutoFill for text and numeric series.*

If you have difficulty with the other questions, here are the lessons that cover the relevant skills:

1   **Refer to: Lesson 1-2: Start Excel and open a new blank workbook.**

3   **Refer to: Lesson 2-1: Enter text and numbers into a worksheet.**

5   **Refer to: Lesson 2-3: Use AutoSum to quickly calculate totals.**

6   **Refer to: Lesson 2-15: Use AutoFill to adjust formulas.**

7   **Refer to: Lesson 2-15: Use AutoFill to adjust formulas.**

9   **Refer to: Lesson 2-6: Select adjacent and non-adjacent rows and columns.**

11   **Refer to: Lesson 2-22: Use the zoom control.**

12   **Refer to: Lesson 1-8: Save a workbook to a local file.**

Blank page

Index

Z

Moving to the next level

The next book/e-book in this series (Essential Skills) builds upon the basic skills you've already learned.

When you have completed this book/e-book you will have excellent Excel skills, good enough to impress any employer, and your Excel skills will be better than most office workers (even those with many years of experience).

You'll be able to create beautifully laid-out worksheets that will really impress and will have completely mastered all of Excel's charting features.

The paper printed book is always in stock at Amazon.

The e-book is also published in unlocked, printable PDF format (just like this basic-skills e-book) and is only available from: https://thesmartmethod.com (this is the publisher's own web site).
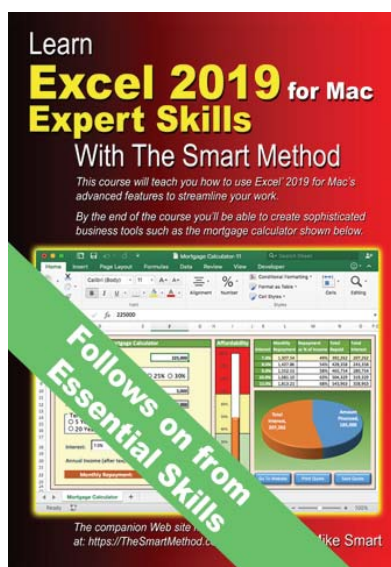
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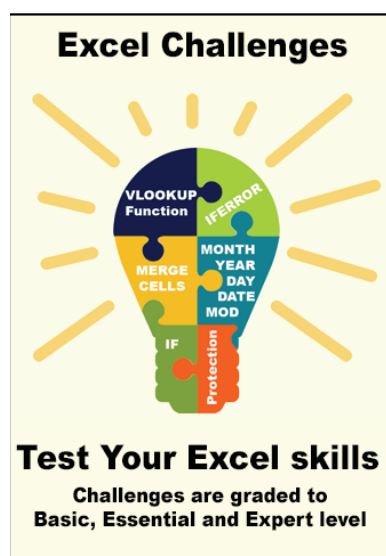
Excel Challenges

Our Excel online challenges are a little like the exercises at the end of each session in this book. Unlike the exercises, the online challenges will test the application of many skills (covered in different sessions in the book).

We began trialling challenges in July 2018 and (at time of writing in January 2019) we have published three challenges. By the time you read this book we may have produced more.

Access the challenges online at:

https://thesmartmethod.com/excel-challenges/

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The *Basic Skills*, *Essential Skills* and *Expert Skills* books are available for all Excel versions in common use (Excel 2007, 2010, 2013, 2016, 2019 and 365 for Windows along with Excel 2016 & 2019 for Apple Mac). You can use the books as courseware during your classes and then give each student a copy of the book to take home as reference material when the course is over. For larger (100+) book orders we can customize your books by adding your own cover design and logo and editing content as required.

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