

Teach Yourself

VISUALLY™

Excel 365



Paul McFedries

Visual
A Wiley Brand

Teach Yourself
VISUALLY™

Excel 365

by Paul McFedries



Teach Yourself VISUALLY™ Excel 365

Copyright © 2023 by John Wiley & Sons, Inc. All rights reserved.

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada and the United Kingdom.

ISBN: 978-1-119-93362-5

ISBN: 978-1-119-93363-2 (ebk.)

ISBN: 978-1-119-93364-9 (ebk.)

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate percopy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 750-4470, or on the web at www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at www.wiley.com/go/permission.

Trademarks: Wiley, the Wiley logo, Visual, the Visual logo, Teach Yourself VISUALLY, Read Less - Learn More and related trade dress are trademarks or registered trademarks of John Wiley & Sons, Inc. and/or its affiliates.

Excel 365 is a trademark of Microsoft Corporation. All other trademarks are the property of their respective owners. John Wiley & Sons, Inc. is not associated with any product or vendor mentioned in this book.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Further, readers should be aware that websites listed in this work may have changed or disappeared between when this work was written and when it is read. Neither the publisher nor authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

For general information on our other products and services or for technical support, please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

If you believe you've found a mistake in this book, please bring it to our attention by emailing our reader support team at wileysupport@wiley.com with the subject line "Possible Book Errata Submission."

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be

available in electronic formats. For more information about Wiley products, visit our web site at www.wiley.com.

Library of Congress Control Number: 2022939049

Cover images: © 200degrees/Getty Images; Screenshot Courtesy of Paul McFedries

Cover design: Wiley

About the Author

Paul McFedries is a full-time technical writer. He has been authoring computer books since 1991 and has more than 100 books to his credit. Paul's books have sold more than 4 million copies worldwide. These books include the Wiley titles *Teach Yourself VISUALLY Microsoft 365*, *Teach Yourself VISUALLY Microsoft Windows 11*, *Microsoft Excel All-in-One For Dummies*, and *Microsoft Excel Data Analysis For Dummies, Fifth Edition*. Paul invites you to drop by his personal website at www.paulmcfedries.com or follow him on Twitter at @paulmcf or on Facebook at www.facebook.com/PaulMcFedries.

Authors' Acknowledgments

It goes without saying that writers focus on text, and I certainly enjoyed focusing on the text that you will read in this book. However, this book is more than just the usual collection of words and phrases designed to educate and stimulate the mind. A quick thumb through the pages will show you that this book is also chock-full of treats for the eye, including copious screenshots, beautiful colors, and sharp fonts. Those sure make for a beautiful book, and that beauty comes from a lot of hard work by the production team at Straive. Of course, what you read in this book must also be accurate, logically presented, and free of errors. Ensuring all of this was an excellent group of editors that I got to work with directly, including project manager Lynn Northrup, technical editor Joyce Nielsen, content refinement

specialist Archana Pragash, copyeditor Elizabeth Welch, and managing editor Christine O'Connor. Thanks to all of you for your exceptional competence and hard work. Thanks, as well, to associate publisher Jim Minatel for asking me to write this book.

How to Use This Book

Who This Book Is For

This book is for the reader who has never used this particular technology or software application. It is also for readers who want to expand their knowledge.

The Conventions in This Book

1 Steps

This book uses a step-by-step format to guide you easily through each task. **Numbered steps** are actions you must do; **bulleted steps** clarify a point, step, or optional feature; and **indented steps** give you the result.

2 Notes

Notes give additional information — special conditions that may occur during an operation, a situation that you want to avoid, or a cross-reference to a related area of the book.

3 Icons and Buttons

Icons and buttons show you exactly what you need to click to perform a step.

4 Tips

Tips offer additional information, including warnings and shortcuts.

5 Bold

Bold type shows command names, options, and text or numbers you must type.

6 Italics

Italic type introduces and defines a new term.

CHAPTER 9
Formatting Workbooks

Add a Workbook Footer

If you will be printing a workbook, you can enhance the printout by building a custom footer that includes information such as the current page number, the total number of pages, the worksheet name, and more.

The footer is the printed page between the bottom of the page text and the bottom margin. Excel offers several predefined footer items that enable you to quickly add data to the workbook footer. If none of the predefined footer items suits your needs, Excel also offers tools that enable you to build a custom footer.

Add a Workbook Footer

- 1 Click the **View** tab.
- 2 Click **Page Layout**.
Excel switches to Page Layout view.
- 3 You can also click the **Page Layout** button.
- 4 Scroll down to the bottom of the page and click the **Add footer** text.

Note: You can also click the **Add header** text and then click the **Header & Footer** tab's **Go to Footer** command.

- 5 Excel opens the footer area for editing.
- 6 Excel adds the **Header & Footer** contextual tab.

- 7 Type your text in the footer.
- 8 If you want to include a predefined footer item, instead, click **Footer**.
- 9 You can also click in either of these footer areas and type or insert text.

- 10 Click a button in the **Header & Footer Elements** group to add that element to the footer.
- 11 Excel inserts a code into the footer, such as **&[Pages]** for the **Number of Pages** element, as shown here.
- 12 Repeat steps 4 and 5 to build the footer.
- 13 Click outside the footer area.

Excel applies the footer. When you are in Page Layout view, you see the current values for elements such as the page number.

TIP
Can I view my headers and footers before I print the workbook?
Yes. Follow these steps:
1 Click the **File** tab.
2 Click **Print**.
3 The right side of the **Print** tab shows you a preview of the workbook printout.
4 The header appears here.
5 The footer appears here.

Teach Yourself VISUALLY™ Excel 365

Table of Contents

[Cover](#)

[Title Page](#)

[Copyright](#)

[Chapter 1: Getting Started with Excel](#)

[Getting to Know Excel](#)

[Start Excel on the Desktop](#)

[Navigate to Excel for the Web](#)

[Tour the Excel Window](#)

[Work with the Excel Ribbon](#)

[Chapter 2: Entering Data](#)

[Learning the Layout of a Worksheet](#)

[Understanding the Types of Data You Can Use](#)

[Enter Text into a Cell](#)

[Enter a Number into a Cell](#)

[Enter a Date or Time into a Cell](#)

[Edit Cell Data](#)

[Delete Data from a Cell](#)

[Chapter 3: Working with Ranges](#)

[Select a Range](#)

[Fill a Range with the Same Data](#)

[Fill a Range with a Series of Values](#)

[Flash Fill a Range](#)

[Move or Copy a Range](#)

[Insert a Row or Column](#)
[Insert a Cell or Range](#)
[Delete Data from a Range](#)
[Delete a Range](#)
[Hide a Row or Column](#)
[Freeze Rows or Columns](#)
[Merge Two or More Cells](#)

Chapter 4: Working with Range Names

[Understanding the Benefits of Using Range Names](#)
[Define a Range Name](#)
[Using Worksheet Text to Define a Range Name](#)
[Navigate a Workbook Using Range Names](#)
[Change a Range Name](#)
[Delete a Range Name](#)

Chapter 5: Formatting Excel Ranges

[Change the Font and Font Size](#)
[Apply Font Effects](#)
[Change the Font Color](#)
[Align Text Within a Cell](#)
[Center Text Across Multiple Columns](#)
[Rotate Text Within a Cell](#)
[Add a Background Color to a Range](#)
[Apply a Number Format](#)
[Change the Number of Decimal Places Displayed](#)
[Apply a Conditional Format to a Range](#)
[Apply a Style to a Range](#)
[Change the Column Width](#)
[Change the Row Height](#)
[Wrap Text Within a Cell](#)
[Add Borders to a Range](#)
[Copy Formatting from One Cell to Another](#)

Chapter 6: Building Formulas

[Understanding Excel Formulas](#)

[Build a Formula](#)

[Understanding Excel Functions](#)

[Add a Function to a Formula](#)

[Add a Range of Numbers](#)

[Build an AutoSum Formula](#)

[Add a Range Name to a Formula](#)

[Reference Another Worksheet Range in a Formula](#)

[Move or Copy a Formula](#)

[Switch to Absolute Cell References](#)

[Troubleshoot Formula Errors](#)

Chapter 7: Manipulating Worksheets

[Navigate a Worksheet](#)

[Rename a Worksheet](#)

[Create a New Worksheet](#)

[Move a Worksheet](#)

[Copy a Worksheet](#)

[Delete a Worksheet](#)

[Zoom In on or Out of a Worksheet](#)

[Split a Worksheet into Two Panes](#)

[Hide and Unhide a Worksheet](#)

Chapter 8: Dealing with Workbooks

[Create a New Blank Workbook](#)

[Create a New Workbook from a Template](#)

[Save a Workbook](#)

[Open a Workbook](#)

[Find Text in a Workbook](#)

[Replace Text in a Workbook](#)

Chapter 9: Formatting Workbooks

[Modify the Workbook Colors](#)

[Set the Workbook Fonts](#)

[Choose Workbook Effects](#)

[Apply a Workbook Theme](#)

[Add a Workbook Header](#)

[Add a Workbook Footer](#)

Chapter 10: Importing Data into Excel

[Understanding External Data](#)

[Import Data from an Access Table](#)

[Import Data from a Word Table](#)

[Import Data from a Text File](#)

[Import Data from a Web Page](#)

[Import Data from an XML File](#)

[Refresh Imported Data](#)

[Separate Cell Text into Columns](#)

Chapter 11: Working with Tables

[Understanding Tables](#)

[Get to Know Table Features](#)

[Convert a Range to a Table](#)

[Select Table Data](#)

[Insert a Table Row](#)

[Insert a Table Column](#)

[Delete a Table Row](#)

[Delete a Table Column](#)

[Add a Column Subtotal](#)

[Convert a Table to a Range](#)

[Apply a Table Style](#)

Chapter 12: Analyzing with PivotTables

[Understanding PivotTables](#)

[Explore PivotTable Features](#)

[Build a PivotTable from an Excel Range or Table](#)

[Refresh PivotTable Data](#)

[Add Multiple Fields to the Row or Column Area](#)

[Add Multiple Fields to the Data Area](#)

[Move a Field to a Different Area](#)

[Group PivotTable Values](#)

[Apply a PivotTable Filter](#)

Chapter 13: Analyzing Data

[Sort a Range or Table](#)

[Filter a Range or Table](#)

[Set Data Validation Rules](#)

[Create a Data Table](#)

[Summarize Data with Subtotals](#)

[Group Related Data](#)

[Analyze Data with Goal Seek](#)

[Highlight Cells That Meet Some Criteria](#)

[Highlight the Top or Bottom Values in a Range](#)

[Analyze Cell Values with Data Bars](#)

[Analyze Cell Values with Color Scales](#)

[Analyze Cell Values with Icon Sets](#)

Chapter 14: Visualizing Data with Charts

[Examine Chart Elements](#)

[Understanding Chart Types](#)

[Create a Chart](#)

[Create a Recommended Chart](#)

[Add Chart Titles](#)

[Add Data Labels](#)

[Position the Chart Legend](#)

[Display Chart Gridlines](#)

[Display a Data Table](#)

[Change the Chart Layout and Style](#)

[Select a Different Chart Type](#)

[Change the Chart Source Data](#)

[Move or Resize a Chart](#)

Chapter 15: Adding Worksheet Graphics

[Draw a Shape](#)

[Insert an Online Image](#)

[Insert a Photo from Your PC](#)

[Insert a SmartArt Graphic](#)

[Move or Resize a Graphic](#)

[Format a Picture](#)

Chapter 16: Collaborating with Others

[Add a Comment to a Cell](#)

[Protect a Worksheet's Data](#)

[Protect a Workbook's Structure](#)

[Save a Workbook to Your OneDrive](#)

[Send a Workbook as an Email Attachment](#)

[Save Excel Data as a Web Page](#)

[Make a Workbook Compatible with Earlier Versions of Excel](#)

[Mark Up a Worksheet with Digital Ink](#)

[Collaborate on a Workbook Online](#)

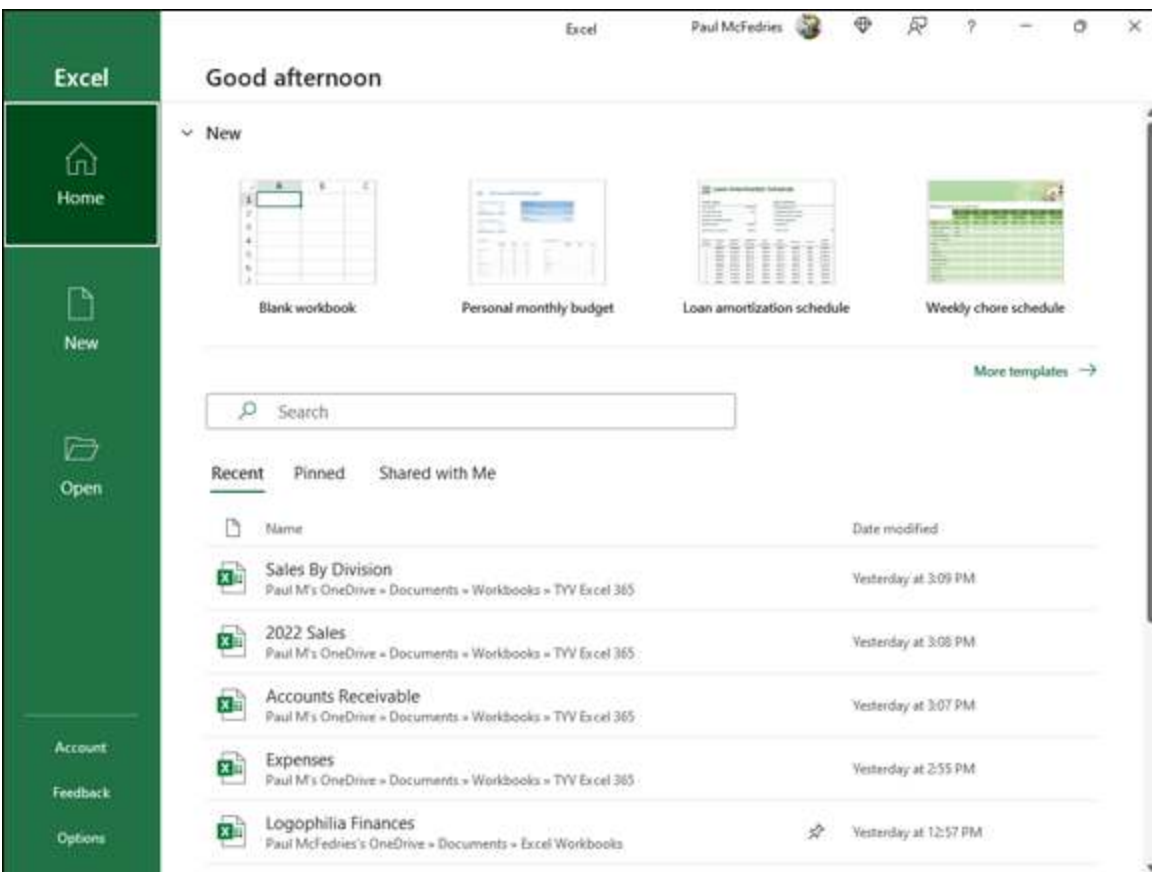
Index

End User License Agreement

CHAPTER 1

Getting Started with Excel

You use Microsoft Excel to create *spreadsheets*, which are documents that enable you to manipulate numbers and formulas to quickly create powerful mathematical, financial, and statistical models. In this chapter you get some background about Excel, learn how to access the desktop and online versions of the program, and take a tour of the program's features.



[Getting to Know Excel](#)

[Start Excel on the Desktop](#)

[Navigate to Excel for the Web](#)

[Tour the Excel Window](#)
[Work with the Excel Ribbon](#)

Getting to Know Excel

Working with Excel involves two basic tasks: building a spreadsheet and then manipulating the data on the spreadsheet. Building a spreadsheet involves adding data such as numbers and text, creating formulas that run calculations, and adding functions that perform specific tasks. Manipulating spreadsheet data involves calculating totals, adding data series, organizing data into tables, and visualizing data with charts.

This section gives you an overview of these tasks. You learn about each task in greater detail as you work through the book.

Build a Spreadsheet

Add Data

	A	B	C	D	E
1	Expense Budget Calculation - 1st Quarter				
2					
3			January	February	March
4		Advertising	\$4,600	\$4,200	\$5,200
5		Rent	\$2,100	\$2,100	\$2,100
6		Supplies	\$1,300	\$1,200	\$1,400
7		Salaries	\$16,000	\$16,000	\$16,500
8		Utilities	\$500	\$600	\$600

You can insert numbers, text, and other characters into any cell in the spreadsheet. Click the cell that you want to work with and then type your data. Your typing appears in the cell that you selected, as well as in the formula bar, which is the large text box above the column letters.

When you are done, press Enter. To edit existing cell data, click the cell and then edit the text in the formula bar.

Add a Formula

	A	B	C
1	Sales	\$453,700	
2	Expenses	\$303,500	
3	Profit	\$150,200	
4			
5			

A *formula* is a collection of numbers, cell addresses, and mathematical operators that performs a calculation. In Excel, you enter a formula in a cell by typing an equal sign (=) and then the formula text. For example, the formula =B1 - B2 subtracts the value in cell B2 from the value in cell B1.

Add a Function

Insert Function

Search for a function:

Type a brief description of what you want to do and then click Go

Go

Or select a category: Statistical

Select a function:

- AVEDEV
- AVERAGE**
- AVERAGEA
- AVERAGEIF
- AVERAGEIFS
- BETA.DIST
- BETA.INV

AVERAGE(number1,number2,...)
Returns the average (arithmetic mean) of its arguments, which can be numbers or names, arrays, or references that contain numbers.

[Help on this function](#)

OK Cancel

A *function* is a predefined formula that performs a specific task. For example, the AVERAGE function calculates the average of a list of numbers, and the PMT function calculates a loan or mortgage payment. You can use functions on their own, preceded by =, or as part of a larger formula. Click **Insert Function** (fx) to see a list of the available functions.

Manipulate Data

Calculate Totals Quickly

	A	B	C	D	E	F
1	Expense Budget Calculation - 1st Quarter					
2						
3			January	February	March	
4		Advertising	\$4,600	\$4,200	\$5,200	
5		Rent	\$2,100	\$2,100	\$2,100	
6		Supplies	\$1,300	\$1,200	\$1,400	
7		Salaries	\$16,000	\$16,000	\$16,500	
8		Utilities	\$500	\$600	\$600	
9		TOTAL	=SUM(C4:C8)			
10						

If you just need a quick sum of a list of numbers, click a cell below the numbers and then click the **Sum** button (Σ), which is available in the Home tab of the Excel Ribbon. You can also select the cells that you want to sum, and their total appears in the status bar.

Fill a Series

	A	B	C
1	January		
2	February		
3	March		
4	April		
5	May		
6	June		
7	July		
8	August		
9	September		
10	October		
11			

Excel enables you to save time by completing a series of values automatically. For example, if you need to enter the numbers 1 to 100 in consecutive cells, you can enter just the first few numbers, select the cells, and then click and drag the lower-right corner to fill in the rest of the numbers. With Excel you can also fill in dates, as well as the names for weekdays and months.

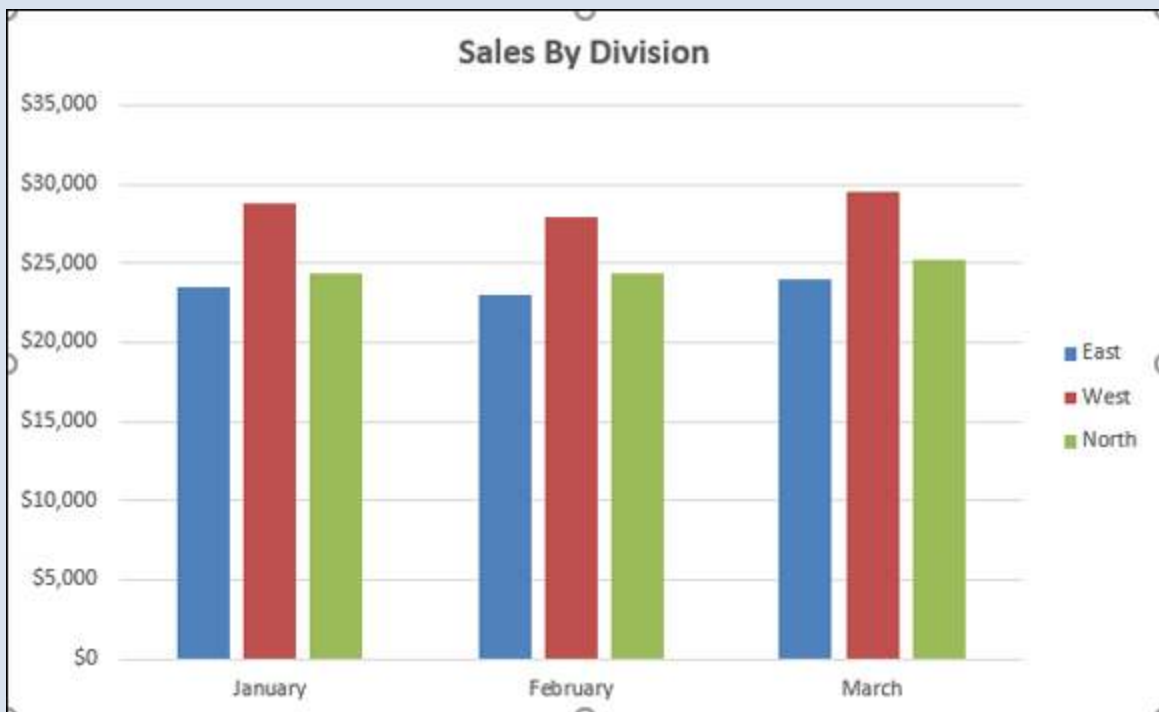
Manage Tables

Account Name	Account Number	Invoice Number	Invoice Amount	Due Date
Door Stoppers Ltd.	01-0045	117328	\$58.50	2/2/2023
Door Stoppers Ltd.	01-0045	117319	\$78.85	1/16/2023
Door Stoppers Ltd.	01-0045	117324	\$101.01	1/26/2023
Door Stoppers Ltd.	01-0045	117333	\$1,685.74	2/11/2023
Chimera Illusions	02-0200	117334	\$303.65	2/12/2023
Chimera Illusions	02-0200	117350	\$456.21	3/15/2023
Chimera Illusions	02-0200	117345	\$588.88	3/6/2023

The row-and-column format of a spreadsheet makes Excel suitable for simple databases called *tables*. Each column

becomes a field in the table, and each row is a record. You can sort the records, filter the records to show only certain values, and add subtotals.

Add a Chart



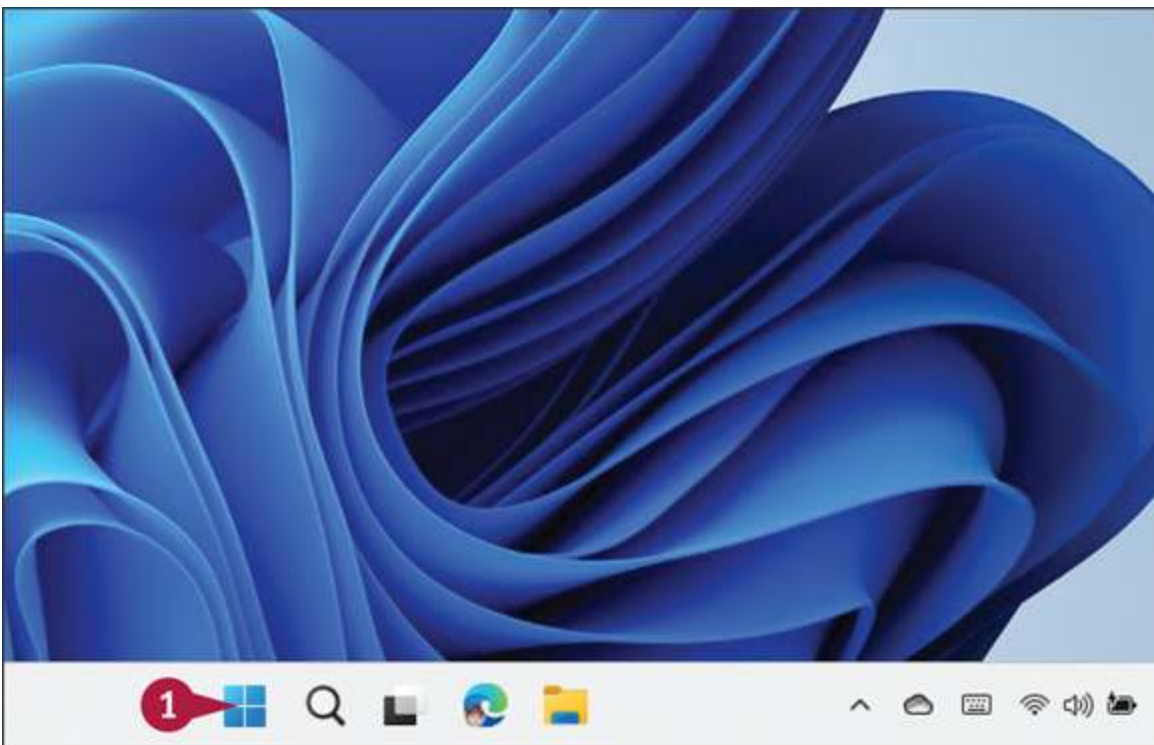
A *chart* is a graphic representation of spreadsheet data. As the data in the spreadsheet changes, the chart automatically changes to reflect the new numbers. Excel offers a wide variety of charts, including bar charts, line charts, and pie charts.

Start Excel on the Desktop

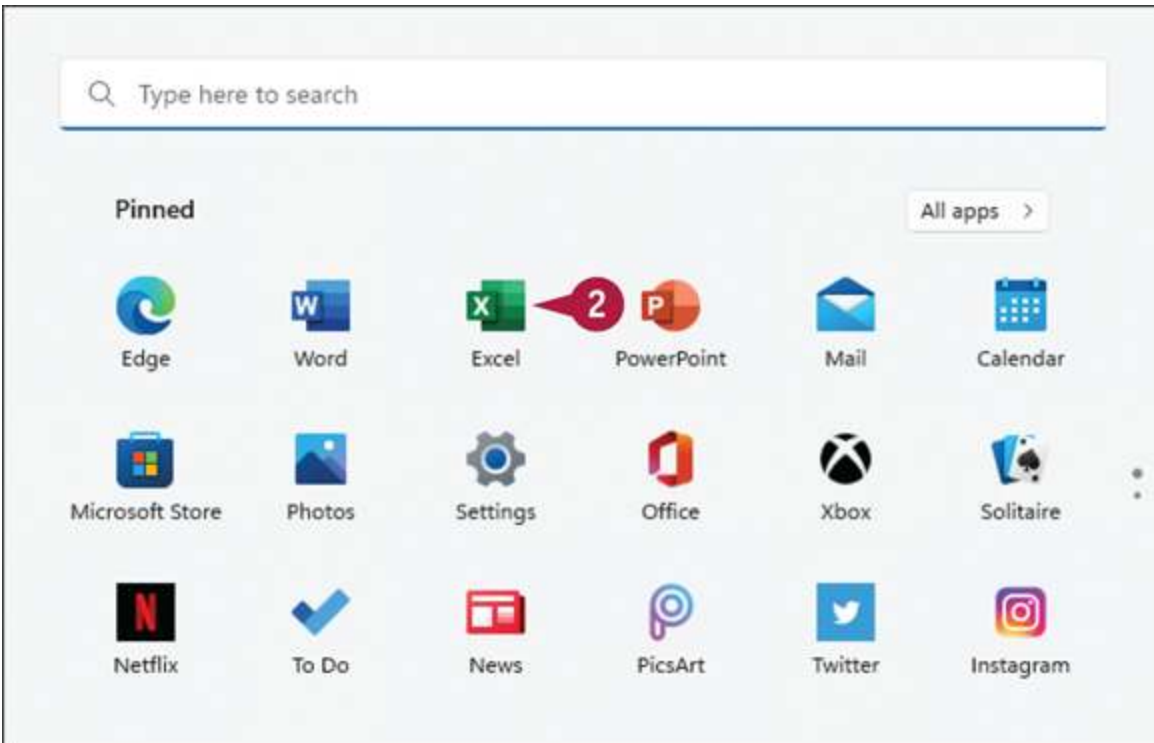
Before you can perform tasks such as adding data and building formulas, you must first start the desktop version of Excel. This brings the Excel window onto the Windows desktop, and you can then begin using the program. In this section, you learn how to start Excel in Windows 11, but the steps are similar if you are using Windows 10.

This task assumes that you have already installed Excel 365 on your computer. If you prefer to use Excel on the web, see the next section, "[Navigate to Excel for the Web.](#)"

Start Excel on the Desktop



1 Click **Start** ().



The Start menu appears.

2 Click **Excel**.

The Microsoft Excel window appears on the desktop.

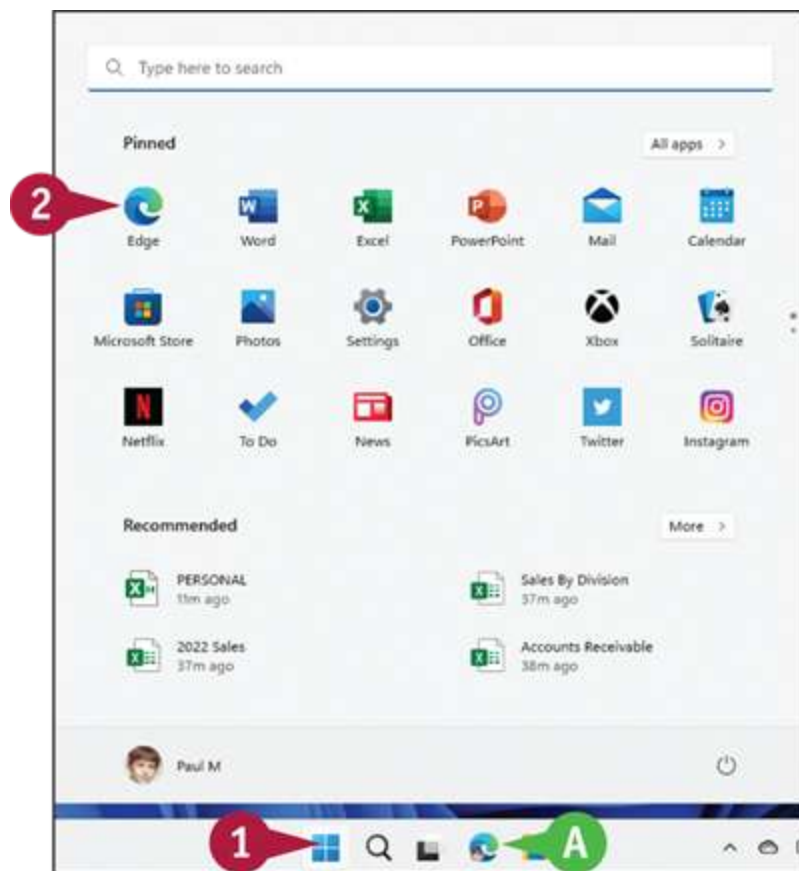
Note: Click **Blank workbook** to open a new Excel file.

Navigate to Excel for the Web

If you want to work with Excel online instead of on the desktop, you need to know how to use your web browser to navigate to the Excel for the web version of the program.

With your Microsoft 365 subscription, you get access to both the desktop and online versions of each app, including Excel. This book uses the desktop version of Excel for its example screens. Fortunately, Excel for the web uses the same layout as the desktop version and offers mostly the same features, so everything you learn in this book applies to Excel for the web.

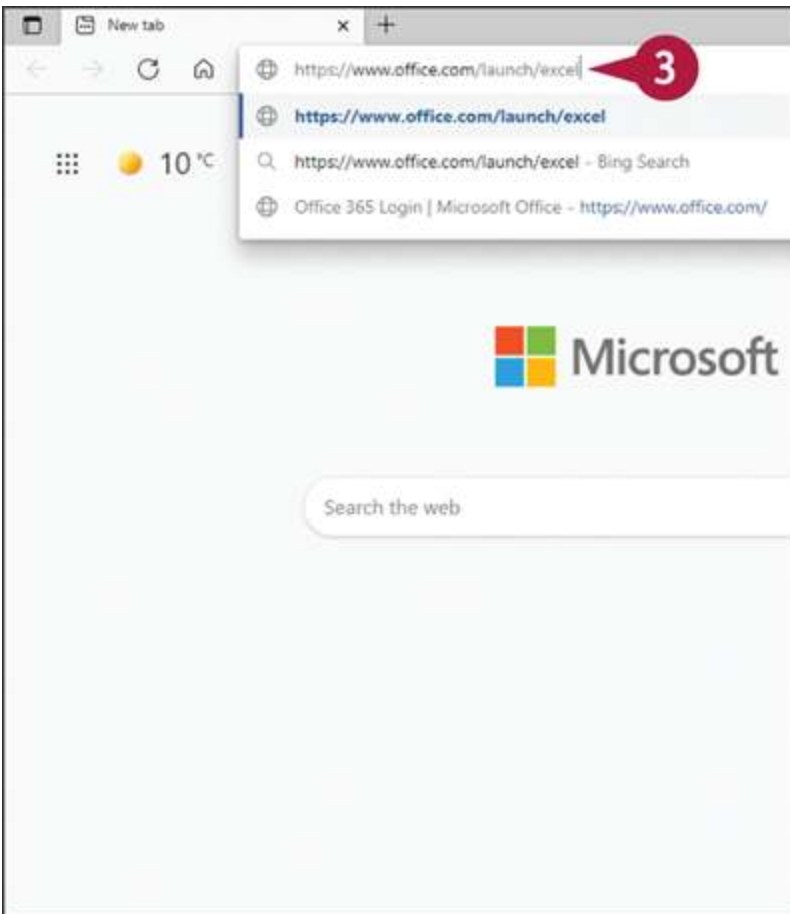
Navigate to Excel for the Web




1 Click **Start**.

The Start menu appears.

2 Click **Edge**.



A If you have Edge pinned to the Windows taskbar, click the **Edge** icon () instead of following steps **1** and **2**.

The Microsoft Edge web browser window appears.

Note: If you prefer to use a different web browser, start that browser instead of Edge.

3 In the address bar, type www.office.com/launch/excel and press **Enter**.

4 If prompted, enter your Microsoft 365 username and password (not shown).

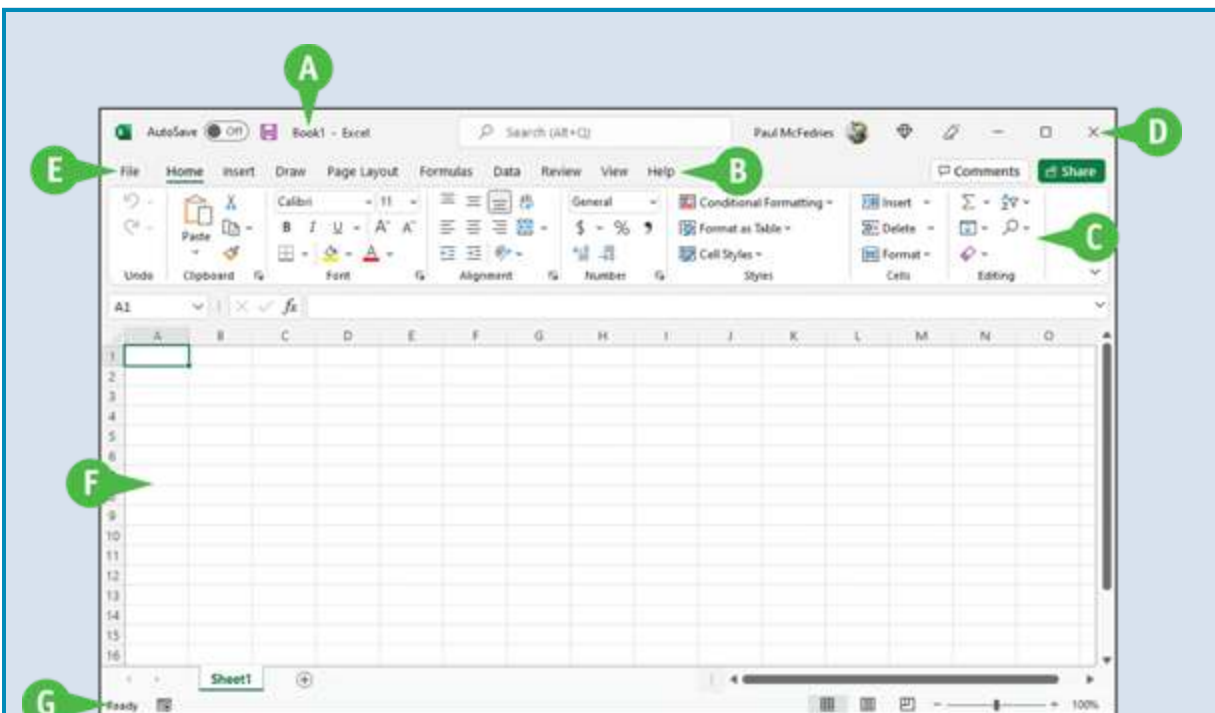
The Excel for the web app appears.

Note: Click **New blank workbook** to open a new Excel file.

Tour the Excel Window

To get up to speed quickly with Excel, it helps to understand the various elements of the Excel window. These include standard window elements such as the title bar, window controls, and status bar; Office-specific elements such as the Ribbon and File tab; and Excel-specific elements such as the worksheet.

If you are using Excel for the web, note that the window you see is nearly identical to the Excel desktop window. The main exception is that, by default, Excel for the web displays a simplified version of the Ribbon.



A Title Bar

The title bar displays the name of the current workbook.

B Ribbon Tabs

You use these controls to display different sets of Ribbon commands.

C Ribbon

This area gives you access to all the Excel commands, options, and features. To learn how to use this element, see the following section, "[Work with the Excel Ribbon.](#)"

D Workbook Window Controls

You use these controls to minimize, maximize, restore, and close the current workbook window.

E File Tab

Click this tab to access file-related commands, such as Save and Open.

F Worksheet

This area displays the current worksheet, and it is where you will do most of your Excel work.

G Status Bar

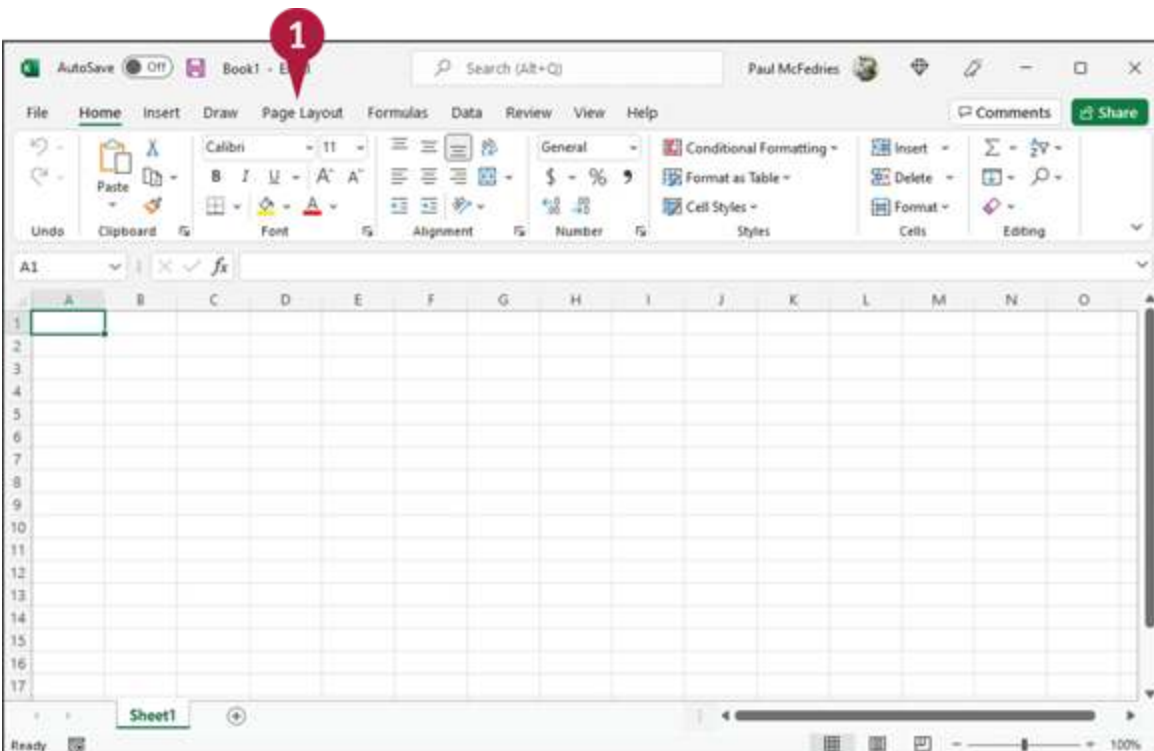
This area displays messages about the current status of Excel, the results of certain operations, and other information.

Work with the Excel Ribbon

You use the Ribbon to access all the features, commands, and options in Excel. The Ribbon is organized into tabs, such as Home, Insert, and Page Layout, and each tab contains a collection of related controls. For example, the Insert tab contains controls related to inserting objects into a worksheet, while the Formulas tab contains controls related to building formulas. Each tab usually includes buttons, lists, and check boxes.

The File tab is a bit different because it displays the Backstage view, which contains controls related to working with Excel files, such as opening, saving, and printing them.

Work with the Excel Ribbon



- 1 Click the tab that contains the Excel feature you want to work with.

Excel displays the controls in the tab.