Enter Data by Range

- **Time-saving technique for entering numbers**
  - Select the range of cells where numbers are to be entered
  - Press Enter after each entry and the active cell will move within the selected range
  - This technique works for multiple columns

Construct Formulas for Mathematical Operations

- **Excel formulas begin with an equal sign and include cell references and arithmetic operators**

Symbols Used in Excel for Arithmetic Operators	
Operator Symbol	**Operation**
+	Addition
-	Subtraction (also negation)
*	Multiplication
/	Division
%	Percent
^	Exponentiation

Construct Formulas for Mathematical Operations

- **Copying formulas in Excel**
  - A formula copied in Excel changes cell references relative to the cell with the formula
    - Example: Copying =C4+D4 from cell E4 to cell E5 will result in =C5+D5
  - To force Excel to keep a cell reference use absolute addressing to fix the formula reference by inserting a dollar sign ($) before the row and/or column

GO!

Construct Formulas for Mathematical Operations

Formula containing absolute cell reference for the first cell in selected range

Percentage of total (E10) calculated for each product

Edit Values in a Worksheet

- **Changing cell contents**
  - Making changes to numbers will result in recalculating any formulas that reference the cell that was changed
    - This is a powerful and useful feature of Excel

- **Formatting cells**
  - Formatting cells will result in a different appearance but will not impact the calculations

Format a Worksheet

- **Formatting**
  - Specifying appearance of cells and overall layout of the worksheet
  - Inserting and deleting rows and columns
    - Existing data is moved and formulas automatically adjusted
  - Adjusting column widths and wrapping text
    - Wrap text displays the contents of a cell on multiple lines, thus increasing the cell height

Format a Worksheet

GO! *All In One*

Use the SUM, AVERAGE, MEDIAN, MIN, and MAX Functions

- **Function**
  - A predefined formula that Excel has already built for you
    - Example: SUM
  - Statistical functions are useful to analyze a group of measurements
    - Examples: AVERAGE, MEDIAN, MIN, and MAX

Use the SUM, AVERAGE, MEDIAN, MIN, and MAX Functions

More Functions button

Statistical functions

ScreenTip describes function

Use the SUM, AVERAGE, MEDIAN, MIN, and MAX Functions

Formula Bar displays function name and arguments

Function Arguments dialog box for AVERAGE function

Range of cells to average

GO!

All In One

Use the SUM, AVERAGE, MEDIAN, MIN, and MAX Functions

Function	Description
SUM	Adds all of the numbers in a selected range of cells
AVERAGE	Adds a group of values, then divides the result by the number of values in the group
MEDIAN	Finds the middle value of a group that has as many values above it in the group as are below
MIN	Determines the smallest value in a selected range
MAX	Determines the largest value in a selected range

Move Data, Resolve Error Messages, and Rotate Text

- **Moving data**
  - Data can be moved by *drag and drop*
  - The formula references will be adjusted (*relative* or *absolute*)
  - If the destination cell is not large enough, Excel will display # # # # #
  - Column width can be increased or data can be rotated to fit in the cell

Move Data, Resolve Error Messages, and Rotate Text

Use COUNTIF and IF Functions and Apply Conditional Formatting

- **Logical functions**
  - Use conditional tests, called *criteria*, to determine a true or false condition
  - IF function: Performs one of two actions depending on the specified criteria
  - COUNTIF function: Counts the number of cells within a range that meet the specified criteria

Use COUNTIF and IF Functions and Apply Conditional Formatting

Use COUNTIF and IF Functions and Apply Conditional Formatting

Apply Conditional Formatting

Custom Format indicated

Text That Contains dialog box

Only cells with the text Order will be formatted

GO!

All In One

Use Date & Time Functions and Freeze Panes

- **NOW function**
  - Places the system date and time in the selected cell
  - Is updated each time the spreadsheet is opened, or by pressing the F9 key
- **Freeze Panes**
  - Freeze Panes button can be used to lock row and/or column labels in place so they will be displayed as the worksheet is scrolled

Create, Sort, and Filter an Excel Table

- **Excel table**
  - Series of rows and columns that contain related data that is managed independently from data in other rows and columns
  - Created by clicking the Insert tab, then in the Tables group, clicking Table button

GO!

Create, Sort, and Filter an Excel Table

- **Sorting and filtering**
    - Sort data in ascending or descending order
    - Filter data to display the portion that meets the criteria specified
    - Data can be sorted or filtered by selecting the sorting and filtering arrow

Create, Sort, and Filter an Excel Table

Sorting and Filtering Tables

Funnel indicates filter applied

Blue row numbers indicate some rows hidden

Only products in *Extract* category display

ScreenTip indicates *Equals "Extract"*

All In One

Format and Print a Large Worksheet

- **Print Titles command**
  - Specify rows and columns to repeat on each printed page
- **Scale to Fit command**
  - Stretch or shrink the width, height, or both, of printed output to fit a maximum number of pages

GO!

Format and Print a Large Worksheet

Navigate a Workbook and Rename Worksheets

- **Navigate to another sheet by clicking the sheet tab**
- **Two ways to rename sheet tabs**
  - Double-click to select the name, and then type a new name
  - Right-click on the sheet tab, then on the shortcut menu, click Rename, and type a new name
- **Change color by right-clicking tab and then selecting Tab Color**

Navigate a Workbook and Rename Worksheets

Sales data for In-Store sales

Second sheet tab displays *In-Store Sales*

First sheet tab displays *Online Sales*

Enter Dates, Clear Contents, and Clear Formats

How Excel Interprets Dates	
Date Typed As:	Completed by Excel As:
7/4/12	7/4/2012
7-4-98	7/4/1998
7/4	4-Jul (current year assumed)
7-4	4-Jul (current year assumed)
July 4	4-Jul (current year assumed)
Jul 4	4-Jul (current year assumed)
Jul/4	4-Jul (current year assumed)
Jul-4	4-Jul (current year assumed)
July 4, 1998	4-Jul-98
July 2012	Jul-12 (first day of month assumed)
July 1998	Jul-98 (first day of month assumed)

Copy and Paste by Using the Paste Options Gallery

- **Copy data to Clipboard by right-clicking selected data, and clicking Copy**
- **The Paste Options gallery is displayed by right-clicking target destination**


Paste Options (6 option buttons)

GO! *All In One*

Edit and Format Multiple Worksheets at the Same Time

- **Grouping multiple worksheets**
  - Press the Ctrl key to select more than one tab, or right-click tab and Select All Sheets
  - *[Group]* displays in the title bar
  - Data entered or edited on the active sheet is reflected in all selected sheets
  - Formulas and formatting entered on the active sheet also are reflected in all selected sheets

Edit and Format Multiple Worksheets at the Same Time

GO!
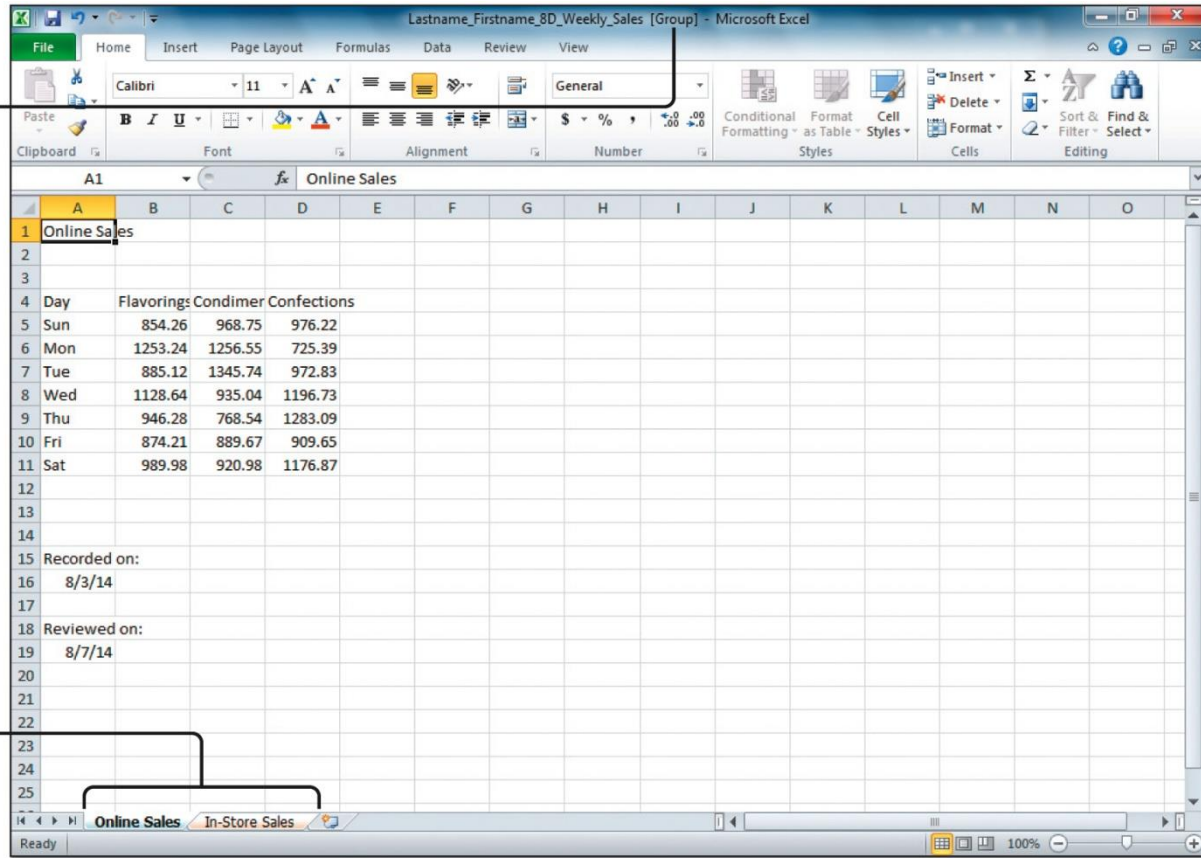
All In One

Create a Summary Sheet with Column Sparklines

- **Summary sheet**
  - Worksheet where totals from other worksheets are displayed
- **Detail sheets**
  - Worksheets with details that affect the totals on the summary sheet
- **Sparklines**
  - Tiny charts that show a data trend

Create a Summary Sheet with Column Sparklines

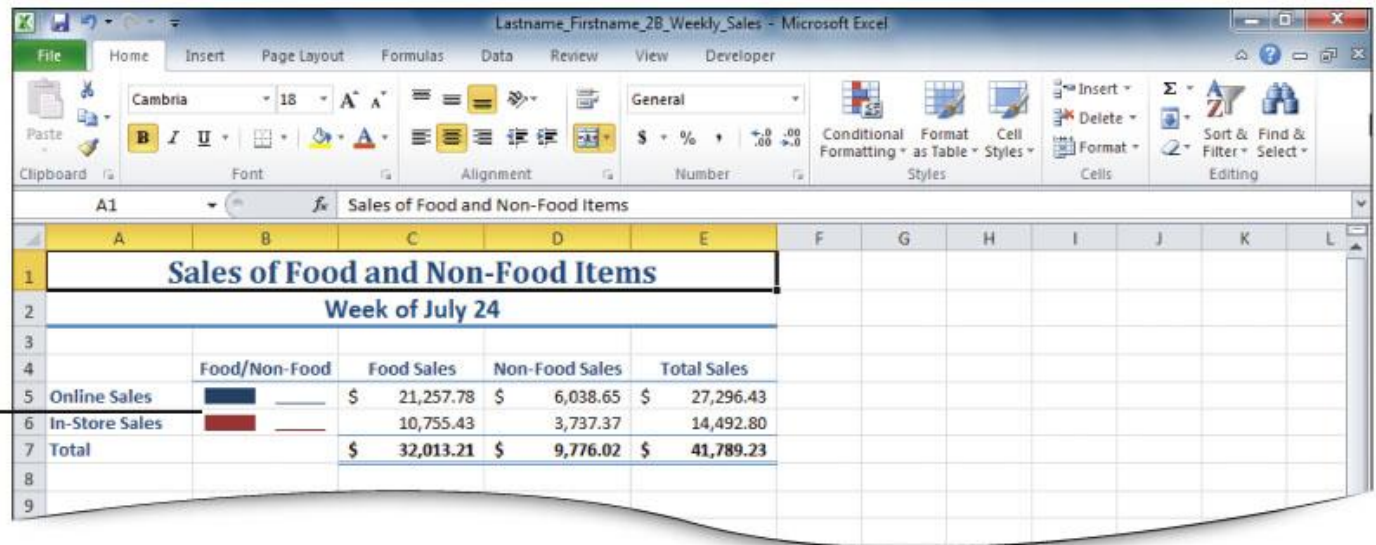Formula Bar indicates formula referring to cell in another worksheet

Total Food Sales from Online Sales worksheet

Create a Summary Sheet with Column Sparklines

Column sparklines compare sales of Food to Non-Food in both Online and In-Store

Format and Print Multiple Worksheets in a Workbook

- **Headers & Footers**
  - Each worksheet can have different formatting and different headers and footers
  - Use grouping to make all worksheets have the same headers and footers
- **Printing**
  - Be sure *[Group]* displays on the title bar
  - Use the Backstage view to set Print options

Covered Objectives

- **Create, Save, and Navigate an Excel Workbook**

- **Enter Data in a Worksheet**

- **Construct and Copy Formulas and Use the SUM Function**

Covered Objectives

- **Format Cells with Merge & Center and Cell Styles**

- **Chart Data to Create a Column Chart and Insert Sparklines**

- **Print, Display Formulas, and Close Excel**

Covered Objectives

- **Check Spelling in a Worksheet**

- **Enter Data by Range**

- **Construct Formulas for Mathematical Operations**

- **Edit Values in a Worksheet**

- **Format a Worksheet**

Covered Objectives

- **Use the SUM, AVERAGE, MEDIAN, MIN, and MAX Functions**

- **Move Data, Resolve Error Messages, and Rotate Text**

- **Use COUNTIF and IF Functions and Apply Conditional Formatting**

Covered Objectives

- **Use Date & Time Functions and Freeze Panes**

- **Create, Sort, and Filter an Excel Table**

- **Format and Print a Large Worksheet**

Covered Objectives

- **Navigate a Workbook and Rename Worksheets**

- **Enter Dates, Clear Contents, and Clear Formats**

- **Copy and Paste by Using the Paste Options Gallery**

Covered Objectives

- **Edit and Format Multiple Worksheets at the Same Time**

- **Create a Summary Sheet with Column Sparklines**

- **Format and Print Multiple Worksheets in a Workbook**