Cut and paste. Insert and delete. Undo and redo. It all seems elementary, but as always in Microsoft Excel 2013, powerful features are hiding beneath the obvious approaches to the simplest tasks; in fact, after reading this chapter, you’ll find solutions to problems you probably never even considered. We’ll cover all the essential editing techniques, including editing multiple worksheets, checking spelling, selectively pasting entries, filling cells automatically, creating data series, and outlining and auditing worksheets.

Copying, cutting, and pasting

When you copy an item, Excel saves it in memory, using a temporary storage area called the Clipboard. You capture the contents as well as the formatting and any attached comments or objects.

For more information about comments, see “Auditing and documenting worksheets” later in this chapter. For more information about objects, see Chapter 10, “Creating and formatting graphics.”

When you copy or cut cells, a marquee appears around the cell. (We used to refer to this scrolling dotted line as marching ants.) This marquee indicates the area you are copying or cutting. When you cut cells, the marquee disappears after you paste the cells. When you copy cells, the marquee persists after you paste the cells so that you can keep pasting these cells in other places.

The Cut, Copy, and Paste buttons in the Clipboard group on the Home tab are just swell, but you should know the keyboard shortcuts for the quintessential editing commands listed in Table 8-1. You can click the equivalent buttons on the ribbon, but really, if you never learn another keyboard shortcut, learn these. They work in most Windows programs.
TABLE 8-1 Essential keyboard shortcuts

<table>
<thead>
<tr>
<th>Press</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+C</td>
<td>Copy</td>
</tr>
<tr>
<td>Ctrl+X</td>
<td>Cut</td>
</tr>
<tr>
<td>Ctrl+V</td>
<td>Paste</td>
</tr>
<tr>
<td>Ctrl+Z</td>
<td>Undo</td>
</tr>
<tr>
<td>Ctrl+Y</td>
<td>Redo</td>
</tr>
</tbody>
</table>

Copying and pasting

After you copy, you can paste more than once. As long as the marquee is visible, you can continue to paste the information from the copied cells. You can copy this information to other worksheets or workbooks without losing your copy area marquee. The marquee persists until you press Esc or perform any other editing action. The area you select for copying must be a single rectangular block of cells. If you try to copy nonadjacent ranges, you get an error message.

Collecting multiple items on the Clipboard

Although you cannot copy nonadjacent selections, you can use the Collect And Copy feature to copy (or cut) up to 24 separate items and then paste them where you want them—one at a time or all at once. You do this by displaying the Clipboard task pane shown in Figure 8-1 by clicking the dialog box launcher next to the word Clipboard on the Home tab on the ribbon.

Ordinarily when copying, you can work with only one item at a time. If you copy several items in a row, only the last item you copy is stored on the Clipboard. However, if you first display the Clipboard task pane and then copy or cut several items in succession, each item is stored in the task pane, as shown in Figure 8-1.

You can change the regular collect-and-copy behavior so that Excel collects items every time you copy or cut regardless of whether the Clipboard task pane is present. To do so, click the Options button at the bottom of the Clipboard task pane (shown in Figure 8-1), and click Collect Without Showing Office Clipboard or Show Office Clipboard Automatically, depending on whether you want the task pane to appear. The latter option activates an additional option, Show Office Clipboard When Ctrl+C Pressed Twice, which is one of the “automatic” methods.
Previewing before you paste

You use the paste preview feature to see what a particular paste option looks like before you commit to actually pasting. After you copy or cut a cell or range, select the destination cell where you want to paste. Click the Paste menu on the Home tab (or right-click and use the Paste Options buttons on the shortcut menu). When you position the pointer over each button, the result of that option is displayed on the worksheet in the specified location. In the following figure, we copied cells A1:A4, right-clicked cell C2 to display the shortcut menu, and then positioned the pointer over the Paste Options buttons:

The Paste menu on the Home tab is usually far enough out of the way that it won’t obscure the area of the sheet you’re working on. And because the shortcut menu appears where you right-click, you would think that it would always be in the way. But as you can see in the figure, it “ghosts” itself when you use the paste preview feature. For more about paste options in general, see “Pasting selectively using Paste Special” later in this chapter, and for information about the Transpose command in particular, see ”Transposing entries” later in this chapter.

Each time you copy or cut an item, a short representation of the item appears in the Clipboard task pane. Figure 8-1 shows four items in the Clipboard task pane. You can paste any or all of the items wherever you choose. To paste a single item from the Clipboard task
pane, first select the location where you want the item to go, and then click the item in the task pane. To empty the Clipboard task pane for a new collection, click the Clear All button.

![Figure 8-1](image)

**Figure 8-1** The Clipboard task pane stores multiple items that you copy or cut.

### Hunting and gathering

You can use the Clipboard task pane to quickly assemble a list. Although the Collect And Copy feature is useful for editing, it can also be a great tool for gathering information. Copy items such as names or addresses from various locations in the order you want them to appear. Then click the Paste All button in the Clipboard task pane to paste all the items you have collected, in the order collected, into a single column.

### Pasting multiples

After you copy, press Ctrl+V to paste whatever you copied. It’s a no-brainer. However, did you know that if you select a range of cells before pasting, Excel fills every cell in that range when you paste? Figure 8-2 illustrates this.
Chapter 8

Copying, cutting, and pasting

Figure 8-2 Before you paste, select more cells than you copied to create multiple copies of your information.

In Figure 8-2, we did the following:

- Copied cell A1, selected the range C1:C12, and then pasted, resulting in Excel repeating the copied cell in each cell in the selected range.

- Copied Cells A1:A4, selected the range E1:E12, and then pasted, resulting in Excel repeating the copied range within the range.

- Copied cells A1:A4, selected cell G1, and then pasted, resulting in an exact duplicate of the copied range.

- Copied cells A1:A4, selected the range A15:G15, and then pasted, resulting in Excel repeating the copied range in each selected column.
Note

If you select a paste range that contains more cells than the copied range, Excel repeats the copied cells until it fills the destination. However, if you select a paste range that is smaller than the copied range, Excel pastes the entire copied range anyway.

Using the Paste Options button

Notice in Figure 8-2 that we clicked the floating Paste Options button that appears near the lower-left corner of the pasted range. This button appears whenever and wherever you paste, offering actions applicable after pasting—a sort of “Smart Paste Special.” (Similar floating buttons offering context-triggered options appear after performing actions other than pasting, too.) The best part is that you can try each action in turn. Keep selecting paste options until you like what you see, and then press Enter. The following describes the most interesting items on the Paste Options menu:

- **Formulas**  Pastes all cell contents, including formulas, but no formatting.
- **Formulas And Number Formatting**  Pastes all cell contents, including formulas and number formats, but no text formats.
- **No Borders**  Pastes everything but borders.
- **Transpose**  Flips a column of data into a row and vice versa.
- **Values**  Pastes cell contents and the visible results of formulas (not the formulas themselves) without formatting.
- **Values And Number Formatting**  Pastes cell contents and the visible results of formulas (not the formulas themselves); retains number formats, but not text formats.
- **Values And Source Formatting**  Pastes cell contents and the visible results of formulas (not the formulas themselves), plus all the copied or cut formats.
- **Keep Source Column Widths**  Retains column widths. This option is like normal pasting with the added action of “pasting” the column width.
- **Formatting**  Leaves the contents of the destination cells alone, and transfers the formatting. This works in the same way as the Format Painter button, located in the Clipboard group on the Home tab.
- **Paste Link**  Instead of pasting the contents of the cut or copied cells, pastes a reference to the source cells, ignoring the source formatting.
● **Picture**  Pastes an image of the selected cells as a static graphic object.

● **Linked Picture**  Pastes an image of the selected cells as a dynamic graphic object. If you make any changes to the original cells, the changes are reflected in the graphic object. This is handy for monitoring remote cells.

### Cutting and pasting

When you cut rather than copy cells, subsequent pasting places one copy in the selected destination, removes the copied cells from the Clipboard, removes the copied data from its original location, and removes the marquee. When you perform a cut-and-paste operation, the following rules apply:

- Excel clears both the contents and the formats from the cut range and transfers them to the cells in the paste range. Excel adjusts any formulas outside the cut area that refer to the cells that were moved.

- The area you select for cutting must be a single rectangular block of cells. If you try to select nonadjacent ranges, you get an error message.

- Regardless of the size of the range you select before pasting, Excel pastes only the exact size and shape of the cut area. The upper-left corner of the selected paste area becomes the upper-left corner of the moved cells.

- Excel overwrites the contents and formats of any existing cells in the range where you paste. If you don’t want to lose existing cell entries, be sure your worksheet has enough blank cells below and to the right of the cell you select as the upper-left corner of the paste area to hold the entire cut area.

- You cannot use Paste Special after cutting. Furthermore, no “floating button” menus appear when you paste after cutting.

### Pasting selectively using Paste Special

Paste Special is quite possibly the most useful (and most used) power-editing feature. You can use this feature in many ways, but probably the most popular way is copying the value in a cell without copying the formatting or the underlying formula. After you copy a cell or cells, click the Paste menu on the Home tab, and click Paste Special to display the Paste Special dialog box, shown in Figure 8-3. (You must copy to use Paste Special. When you cut, Paste Special is unavailable.) The most popular Paste Special actions are directly accessible as commands on the Paste menu on the Home tab, as shown on the left in Figure 8-3.
The Paste menu is actually a button with a downward-pointing arrow below it; clicking the button is equivalent to clicking the Paste command. To display the menu shown on the left in Figure 8-3, click the arrow.

**Figure 8-3** Paste Special is probably the most popular power-editing feature, and its most often used options are available as commands on the Paste menu.

You can also open the Paste Special dialog box by right-clicking the cell where you want to paste and then clicking Paste Special.

Here’s what the Paste Special options do:

- **All**  Predictably, pastes all aspects of the selected cell, which is the same as clicking the Paste command.

- **Formulas**  Transfers only the formulas from the cells in the copy range to the cells in the paste range, adjusting relative references. This option is also available as a command on the Paste menu.
• **Values** Pastes static text, numeric values, or only the displayed values resulting from formulas. This option is also available as the Paste Values command on the Paste menu.

• **Formats** Transfers only the formats in the copy range to the paste range.

**Note**

You can quickly copy and paste formats from a single cell or from a range of cells by using the Format Painter button, next to the Paste menu on the Home tab.

• **Comments** Transfers only comments attached to selected cells.

• **Validation** Pastes only the data validation settings you have applied to the selected cells.

• **All Using Source Theme** Transfers the copied data, and applies the theme from the copied cells.

• **All Except Borders** Transfers data without disturbing the border formats you spent so much time applying. This option is also available as the No Borders command on the Paste menu.

• **Column Widths** Transfers only column widths, which is handy when trying to make a worksheet look consistent for presentation.

• **Formulas And Number Formats** Transfers only formulas and number formats, which is helpful when you are copying formulas to previously formatted areas. Usually, you want the same number formats applied to formulas you copy, wherever they happen to go.

• **Values And Number Formats** Transfers only the resulting values (but not the formulas) and number formats.

• **All Merging Conditional Formats** Transfers cell contents and formats, and merges any conditional formats in the copied cells with those found in the destination range. Copied conditions take precedence if there is a conflict.

For more information about themes, see “Using themes and cell styles” in Chapter 9, “Worksheet formatting techniques.” For more about conditional formatting, see “Formatting conditionally” in Chapter 9.

Because the All option pastes the formulas, values, formats, and cell comments from the copy range into the paste range, it has the same effect as clicking Paste, probably making
you wonder why Excel offers this option in the Paste Special dialog box. That brings us to our next topic—the Operation options.

**Pasting using math operators**

You use the options in the Operation area of the Paste Special dialog box to mathematically combine the contents of the copied cells with the contents of the cells in the paste area. When you select any option other than None, Excel does not overwrite the destination cell or range with the copied data. Instead, it uses the specified operator to combine the copy and paste ranges.

For example, say you want to get a quick list of combined monthly totals for the Northern and Eastern regions in Figure 8-4. First, copy the Northern Region figures to an empty area of the worksheet, and then copy the Eastern Region numbers; select the first cell in the column of values you just copied and click Paste Special. You then select the Values and Add options in the Paste Special dialog box, and after clicking OK, you get the result shown at the bottom of Figure 8-4.

![Figure 8-4](image)

**Figure 8-4** We used the Values option in the Paste Special dialog box to add the totals from the Eastern Region to those of the Northern Region.
You’ll find the MonthlyClaims.xlsx file with the other examples on the companion website.

The other options in the Operation area of the Paste Special dialog box combine the contents of the copy and paste ranges using the appropriate operators. Just remember that the Subtract option subtracts the copy range from the paste range, and the Divide option divides the contents of the paste range by the contents of the copy range. Also note that if the copy range contains text entries and you use Paste Special with an Operation option (other than None), nothing happens.

Select the Values option when you use any Operation option. As long as the entries in the copy range are numbers, you can use All, but if the copy range contains formulas, you’ll get “interesting” results. As a rule, avoid using the Operation options if the paste range contains formulas.

**Note**

Excel assigns the value 0 to blank spaces in the copy and paste ranges, regardless of which Operation option you select.

**Pasting links**

The Paste Link button in the Paste Special dialog box, shown in Figure 8-4, is a handy way to create references to cells or ranges. Although the Paste Special dialog box offers more options, using the Paste Link command on the Paste menu on the Home tab is more convenient. When you click Paste Link, Excel enters an absolute reference to the copied cell in the new location. For example, if you copy cell A3, select cell B5, click the Paste menu, and then click Paste Link, Excel enters the formula =$A$3 in cell B5.

If you copy a range of cells, Paste Link enters a similar formula for each cell in the copied range to the same-sized range in the new location.

*For more information about absolute references, see “Understanding relative, absolute, and mixed references” in Chapter 12, “Building formulas.”*

** Skipping blank cells**

The Paste Special dialog box contains a Skip Blanks check box you can select when you want Excel to ignore any blank cells in the copy range. If your copy range contains blank cells, Excel usually pastes them over the corresponding cells in the paste area. As a result, empty cells in the copy range overwrite the contents, formats, and comments in corresponding cells of the paste area. When you select Skip Blanks, however, the corresponding cells in the paste area are unaffected by the copied blanks.
Transposing entries

One of the often-overlooked but extremely useful Paste Special features is Transpose, which helps you reorient the contents of the copied range when you paste—that is, data in rows is pasted into columns, and data in columns is pasted into rows. (This option is also available as a command on the Paste menu.) For example, in Figure 8-5, we copied the data shown in cells B3:E3, and then we selected cell J3 and clicked Transpose on the Paste menu on the Home tab. This works both ways. If we subsequently select the range just pasted and click Transpose again, the data is pasted in its original orientation.

![Figure 8-5](image)

Figure 8-5 We copied cells B3:E3, selected cell J3, and then clicked Home, Paste, Transpose to redistribute the row of labels into a column of labels.

**INSIDE OUT**

**Using paste values with arrays**

As with any other formula, you can convert the results of an array formula to a series of constant values by copying the entire array range and—without changing your selection—clicking the Home tab, Paste, Paste Values. When you do so, Excel overwrites the array formulas with their resulting constant values. Because the range now contains constant values rather than formulas, Excel no longer treats the selection as an array. For more information about arrays, see “Using arrays” in Chapter 12.
Note
If you transpose cells containing formulas, Excel transposes the formulas and adjusts cell references. If you want the transposed formulas to continue to correctly refer to nontransposed cells, be sure that the references in the formulas are absolute before you copy them. For more information about absolute cell references, see “Using cell references in formulas” in Chapter 12.

Pasting hyperlinks
The Hyperlink command on the Insert tab has a specific purpose: to paste a hyperlink that refers to the copied data in the location you specify. When you create a hyperlink, it’s as though Excel draws an invisible box, which acts like a button when you click it, and places it over the selected cell.

Hyperlinks in Excel are similar to web links that, when clicked, launch a webpage. You can add hyperlinks in your workbooks to locations on the web—a handy way to make related information readily available. You can use hyperlinks to perform similar tasks among your Excel worksheets, such as to provide an easy way to access other worksheets or workbooks that contain additional information. You can even create hyperlinks to other Microsoft Office documents, such as a report created in Microsoft Word or a Microsoft PowerPoint presentation.

Within Excel, you create a hyperlink by copying a named cell or range, navigating to the location where you want the hyperlink (on the same worksheet, on a different worksheet, or in a different workbook), and then clicking Insert, Hyperlink. To create a hyperlink in and among Excel worksheets and workbooks, you must first assign a name to the range to which you want to hyperlink. (The easiest method is to select the cell or range and type a name in the Name box at the left end of the formula bar.) Note that hyperlinks differ from Excel links, which are actually formulas.

For more information, see “Pasting links” earlier in this chapter. For information about defining names, see “Naming cells and cell ranges” in Chapter 12. For more information about hyperlinks, see Chapter 31, “Linking, hyperlinking, and embedding.”

When you rest your pointer on a hyperlink, a ScreenTip appears showing you the name and location of the document to which the hyperlink is connected, as shown in Figure 8-6.
Chapter 8
Worksheet editing techniques

Figure 8-6  We created hyperlinks to supporting workbooks at the bottom of this worksheet.

To use a hyperlink, just click it. To select the cell containing the hyperlink without activating the link, hold the mouse button down until the pointer changes to a cross and then release the mouse button. To edit or delete a hyperlink, right-click it and then click Edit Hyperlink or Remove Hyperlink.

The NorthwindSales.xlsx, NorthwindStaff.xlsx, and NorthwindStrategy.xlsx files are with the other examples on the companion website.

Moving and copying with the mouse

Sometimes referred to as direct cell manipulation, this feature lets you quickly drag a cell or range to a new location. It’s that simple. When you select a cell or range, move the pointer over the edge of the selection until the four-headed arrow pointer appears, and then click the border and drag the selection to wherever you like. As you drag, an outline of the selected range appears, which you can use to help position the range correctly.

To copy a selection rather than move it, hold down the Ctrl key while dragging. The pointer then appears with a small plus sign next to it, as shown in Figure 8-7, which indicates you are copying rather than moving the selection.
If direct cell manipulation doesn’t seem to be working, click the File tab, click Options, and in the Advanced category under Editing Options, check that the Enable Fill Handle And Cell Drag-And-Drop option is selected.

Figure 8-7 Before you finish dragging, press Ctrl to copy the selection. A plus sign and destination reference appear next to the pointer.

You can also use direct cell manipulation to insert copied or cut cells in a new location, moving existing cells out of the way in the process. For example, in the first image in Figure 8-8, we selected cells A6:E6 and then dragged the selection while holding down the Shift key. A gray I-beam indicates where Excel will insert the selected cells when you release the mouse button. The I-beam appears whenever the pointer rests on a horizontal or vertical cell border. In this case, the I-beam indicates the horizontal border between rows 8 and 9, but we could just as easily insert the cells vertically (which would produce unwanted results). You’ll see the I-beam insertion point flip between horizontal and vertical as you move the pointer around the worksheet. To insert the cells, release the mouse button while still pressing the Shift key. When you release the mouse button, the selected cells move to the new location, as shown in the second image in Figure 8-8.

For information about using the keyboard for this task, see “Inserting copied or cut cells” later in this chapter.

If you press Ctrl+Shift while dragging, the selected cells are both copied and inserted instead of moved. Again, a small plus sign appears next to the pointer, and Excel inserts a copy of the selected cells in the new location, leaving the original selected cells intact.
You can also use these techniques to select entire columns or rows and then move or copy them to new locations.

Figure 8-8 The gray I-beam indicates where Excel will insert selected cells.

Inserting and deleting

In the realm of spreadsheets, the complementary actions of inserting and deleting are collectively the second most-used editing techniques. Inserting and deleting rows and columns of information have some nuances that don’t exist in the world of word processing, for example, but that you must consider.

Inserting columns and rows

On the Home tab, you can click commands on the Insert menu in the Cells group to add cells, columns, and rows to a worksheet—and even add a new sheet to a workbook. However, when you need to insert entire rows or columns, it’s easiest to right-click a column or row heading, which simultaneously selects the whole row or column and displays the shortcut menu shown in Figure 8-9. (You can also drag through several rows or columns and then right-click the selection to insert the same number of columns or rows you selected.) Then just click Insert.

After inserting the column in Figure 8-9, the contents of column D move to column E, leaving the freshly inserted column D blank and ready for new information. The newly inserted cells take on the same formats as the cells in the column to the left, and Excel adjusts the formulas in cells F4:F15 to account for the expanded range.

A floating Insert Options button appears after you insert, which you can use to change the formatting of the inserted cells. Click the button to display the menu shown in the second image in Figure 8-9. If you want to extend a table by inserting a column on its right, for
example, you might want to use the Format Same As Right or Clear Formatting option. The default Format Same As Left option works for our example.

![Figure 8-9](image)

Figure 8-9 Right-click a row or column heading, and click Insert. Click the Insert Options button that appears after you insert for some post-insertion options.

**Note**

When you insert a row instead of a column, the commands on the Insert Options menu are Format Same As Above (the default), Format Same As Below, and Clear Formatting.
Handy keyboard shortcuts

Some of us are mouse fans; others are keyboard jockeys. If you’re a good typist, you might prefer keeping your hands on the keys as much as possible. If so, this table of keyboard shortcuts for typical insertion actions is for you. Note that commas denote sequential keystrokes and plus signs denote additive keystrokes. For example, you press Alt, let go, then press I, let go, then press R to insert a row. But you hold down Shift and press Spacebar to select a row.

<table>
<thead>
<tr>
<th>Press</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alt, I, R</td>
<td>Insert rows</td>
</tr>
<tr>
<td>Alt, I, C</td>
<td>Insert columns</td>
</tr>
<tr>
<td>Alt, E, D</td>
<td>Delete selected rows or columns</td>
</tr>
<tr>
<td>Ctrl+Spacebar</td>
<td>Select columns</td>
</tr>
<tr>
<td>Shift+Spacebar</td>
<td>Select rows</td>
</tr>
</tbody>
</table>

Inserting cells

You can insert cells or cell ranges rather than entire rows or columns by using the shortcut menu technique described earlier or by clicking Home, Insert, Insert Cells, which displays the Insert dialog box shown in Figure 8-10.

![Insert dialog box](image)

**Figure 8-10** Click the Insert Cells command to choose the direction in which to move existing cells in your worksheet.

Note

The Insert menu is actually a button with an arrow to its right; if you click the button, it is the equivalent of clicking the Insert Cells command, which moves cells either down or to the right, depending on the shape of the selected cell range. To display the menu shown on the left in Figure 8-10, click the arrow.
Note
You can insert multiple nonadjacent cells when you use the Insert command, but only when inserting blank cells. Inserting nonadjacent cut or copied cells is not allowed.

Inserting copied or cut cells

Often, you need to copy or move existing data to the middle of another area of existing data, moving other data out of the way in the process. You can do this the hard way by inserting just the right amount of space in the destination area and then copying or cutting cells and pasting them to the new location. However, it’s much easier to click Home, Insert, Insert Copied Cells or Insert Cut Cells because this handles all these actions for you. These commands appear on the Insert menu (or on the shortcut menu) only when you copy or cut some cells. Sometimes it’s obvious what needs to happen. For example, if you cut an entire row, you’ll surely want to insert the entire row somewhere else. In these cases, Excel employs some common-sense rules and executes the action without hesitation. If Excel needs more information about how to adjust the worksheet, it opens the Insert Paste dialog box shown in Figure 8-11.

![Figure 8-11](image)

Figure 8-11 When you insert after copying or cutting cells, the Insert Paste dialog box appears.

For example, you can use cutting and inserting to add rows for more data in Figure 8-11 by copying the rows containing 2013 data and editing the contents, thereby saving yourself some unnecessary typing. To do so, select cells A6:F9 and press Ctrl+C to copy the range. Then click Home, Insert, Insert Copied Cells to display the Insert Paste dialog box. Then
select the Shift Cells Down option, and click OK. Excel inserts the copied data and moves the rest of the table down to accommodate the insertion, as shown in Figure 8-12.

![Figure 8-12](image)

**Figure 8-12** Inserting previously copied or cut cells is faster than inserting cells and then copying or cutting data to fill the inserted range.

### Deleting cells, columns, and rows

You can use the Delete menu on the Home tab (located in the Cells group) to remove cells, rows, or columns from your worksheet. Deleting removes the selected cell or range from the worksheet, shifting cells to fill the empty space you create.

**Note**

The Delete menu is actually a button with an arrow to its right; if you click the button, it is the equivalent of clicking the Delete Cells command, which moves remaining cells either up or to the left, depending on the shape of the selected cell range. To display the menu, click the arrow.
Here are some guidelines for using Delete:

- You can delete multiple nonadjacent rows by pressing Ctrl and clicking each non-adjacent row before clicking Delete. Excel shifts everything below the deleted rows upward and adjusts any formulas accordingly.

- You can delete entire columns by selecting the column heading before clicking the Home tab and then, in the Cells group, the Delete command. Excel moves everything to the right of the deleted columns left and adjusts any formulas accordingly.

- You can delete multiple nonadjacent selections in one operation as long as you delete either entire rows or entire columns. You cannot delete entire rows and columns at the same time, however, because they overlap. The universe would implode.

- You can delete partial rows and columns by selecting a cell or cells and clicking Delete. Excel displays the Delete dialog box shown in Figure 8-13. You can choose the direction you want to shift remaining cells to fill the gap, or you can choose to eliminate the entire rows or columns inhabited by the selected cells.

![Figure 8-13](image-url) Use the Delete dialog box to choose the direction to move cells.

For more information about formulas and cell references, see Chapter 12.
When you delete (or insert) partial rows or columns, it's easy to misalign data. For example, in Figure 8-14 we deleted cells A6:E9 with the default Shift Cells Up option selected. This eliminated the cells referred to by the formulas in column F, producing #REF errors. In addition, the column F totals in rows 13 through 20 now refer to the data in rows 9 through 16. This is a case where we should have cleared the cell contents rather than deleted the cells.

**CAUTION!**

Although you can generally use Undo to cancel a deletion, you should take heed of these important points. Before you delete an entire column or row, scroll through your worksheet to be sure you're not erasing important information that is not currently visible. Deleting cells that are referred to by formulas can be disastrous, as Figure 8-14 illustrates. Finally, when you delete a column or row referred to by an argument of a function, Excel modifies the argument, if possible, to account for the deletion. This adaptability is a compelling reason to use functions wherever possible. For more about using functions, see Chapter 13, “Using functions.”

![Figure 8-14](image-url) You can create errors when you delete the wrong cells.
Fixing formula problems

In the following worksheet, notice that the formulas in row 16 have small triangular indicators in the upper-left corner of each cell (they are green on your screen):

These triangles indicate an anomaly of some kind; in this case, we moved cells around within the table, so the formulas no longer include the cells we moved. Notice in the graphic that the formula bar displays the formula =SUM(B4:B47), omitting cells B8:B15. We used the Insert Cut Cells technique described in this chapter to move the rows containing January through August data from the top of the table to the bottom, which created the problem. When you insert or move rows or columns at the edge of cell ranges referred to by formulas, the formulas might not be able to adjust properly, as is the case here. Excel offers help. As shown here, not only do the little flags appear, but when you select one of the formula cells, a menu appears offering a Formula Omits Adjacent Cells item containing pertinent options.

The Update Formula To Include Cells option works correctly in our example. This is a much easier solution than editing each formula manually.
Clearing cells

The difference between deleting and clearing isn’t subtle. Although deleting completely removes selected cells, shifting adjacent cells to fill the void, clearing leaves selected cells in place and removes contents, formats, and any comments that might be attached. The Home tab includes a Clear menu, which is one of the buttons in the Editing group. Excel hides the “Clear” label if the window is too narrow, but you can always recognize the button by its eraser icon. Figure 8-15 shows the Clear menu.

Figure 8-15 The commands on the Clear menu remove the corresponding attributes of selected cells without removing the cells.

The commands on the Clear menu perform the following tasks on selected cells:

- Clear All removes all text, numbers, formulas, formats, borders, and any attached comments.
- Clear Formats removes only formatting and borders.
- Clear Contents removes only text, numbers, and formulas.
- Clear Comments removes only the attached comments.
- Clear Hyperlinks removes only hyperlinks, leaving the formatting intact.
- Remove Hyperlinks removes hyperlinks and formatting.

Inserting, deleting, and clearing cells with the mouse

To perform the next group of operations, you use the fill handle, a tiny black square that appears in the lower-right corner of the selection rectangle, which is the bold border that appears around the selected cell or range. If you select entire rows or columns, the fill handle appears next to the row or column heading.
When you select a single cell and drag the fill handle in any direction, Excel copies the contents of that cell to all the cells through which you drag (with exceptions, which you’ll learn later). When you select more than one cell, Excel either copies the range or extends a data series in the direction you drag, depending on the cell contents, the shape of the selection, and whether you are holding down Ctrl. Pressing the Shift key while dragging the fill handle lets you insert blank cells into a worksheet.

In the worksheet at the top in Figure 8-16, we selected A7:G7 and dragged the fill handle one row down while pressing the Shift key. The pointer became a double-headed arrow. The worksheet on the bottom in Figure 8-16 shows the newly inserted blank cells.

You use the same technique to insert entire blank rows or columns—just select the row or column headings, or press Shift and drag the fill handle, which appears adjacent to the row or column headings. You can just as easily delete cells, columns, or rows using a similar technique. To delete the cells we inserted in Figure 8-16, select A8:G8, hold down Shift, and then drag the fill handle up one row. The area turns gray, and the pointer changes to a similar double-headed arrow, with the arrows pointing inward this time. When you release the mouse button, Excel deletes the selection.

Figure 8-16 Drag the fill handle while pressing Shift to insert cells.

If you drag the fill handle back over selected cells without pressing Shift, you clear the cell contents instead of deleting the cells. This clears formulas, text, and numbers only. If you
hold down the Ctrl key while dragging over a selection, you clear all the cell contents as well as the formatting, borders, and comments.

### Fill handles and cell selection rectangles

The *cell selection rectangle* is the heavy black-bordered box that surrounds the currently selected cells. There is only one *fill handle* in a cell selection rectangle, regardless of the number of cells:

![Fill handle](image)

Drag the fill handle to extend the selection and perform other feats of prowess, as described in this chapter. Dragging the selection rectangle moves or copies the selection, also as described in this chapter. If the fill handle is not visible, click the File tab, click Options, and then click the Advanced category. In the Editing Options area, select the *Enable Fill Handle And Cell Drag-And-Drop* check box. The *Alert Before Overwriting Cells* check box is automatically selected (and recommended).

### Dragging with the right mouse button

If you select cells and then drag the selection rectangle using the right mouse button, a shortcut menu appears when you release the button, as shown in Figure 8-17. You can use the options on the shortcut menu to consummate your edit in a variety of ways.

![Figure 8-17](image)
The options on the shortcut menu are as follows:

- **Move Here**  Moves the source cells to the selected destination
- **Copy Here**  Copies the source cells to the selected destination
- **Copy Here As Values Only**  Copies the visible values from the source cells to the selected destination cells but does not copy formulas
- **Copy Here As Formats Only**  Copies the formats of the source cells to the destination cells without affecting the contents
- **Link Here**  Creates linking formulas at the destination that refer to the source cells
- **Create Hyperlink Here**  Creates a web-style link to the source cells in the selected destination
- **The Shift options**  Lets you copy or move the source cells to a location that contains existing data, shifting it out of the way in the selected direction

**Undoing previous actions**

The word *undo* was never widely used until people started using computers; now it’s a verb that we all wish we could apply to more things in life. In Excel, you can click the Undo button, located on the Quick Access Toolbar, or press Ctrl+Z to recover from mistakes.

The Undo button includes a drop-down list of up to the last 100 actions you performed. You can then select and simultaneously undo any number of these actions at once. You display the drop-down list by clicking the small downward-pointing arrow next to the Undo button, as shown in Figure 8-18.

**Figure 8-18**  Click the arrow next to the Undo button to select and simultaneously undo up to the last 100 actions.
With the drop-down list visible, move your pointer down the list, and select the number of actions you want to undo. When you click, your worksheet reverts to the condition it was in before the selected actions.

Undo reverses the effect of most editing actions and restores any entry in the formula bar. For example, if you accidentally delete a range of data, use Undo to replace the entries. If you edit the contents of a cell and subsequently discover that your changes are incorrect, use Undo to restore the original cell entry. In addition, you can use Undo to reverse formatting and many other types of actions.

Unfortunately, Excel has many actions that Undo can’t reverse, such as saving workbooks and deleting worksheets. Closing a workbook erases all the undoable actions displayed in the Undo list. Predictably, actions you cannot undo do not appear in the Undo drop-down list.

**Redoing what you’ve undone**

After you use Undo, you can then use Redo, which, unsurprisingly, reverses Undo. You can press Ctrl+Y to redo the last action or click the Redo button on the Quick Access Toolbar, which operates similarly to Undo. Redo also offers a drop-down list with all the undone editing actions. When you redo an action, Excel transfers it to the Undo drop-down list. Redo is valid only if Undo was your last action. After you have redone all the “undos” (up to 100), you’re back to the “true” last action—that is, the last action you performed before you used Undo.

You can take advantage of Undo and Redo to see the effects of an editing change in your worksheet. If you edit a cell that is referred to in several formulas, you can use Undo and Redo to get a “before and after” look at the results displayed by the formulas.

**Repeating your last action**

To repeat the last editing action, press Ctrl+Y. (The Repeat button does not ordinarily appear on the Quick Access Toolbar, but you can add it. See “Customizing the Quick Access Toolbar” in Chapter 3, “Custom-tailoring the Excel workspace.”)

Redo and Repeat share the same keyboard shortcut because you can do only one or the other at any given moment. Being able to repeat the last action is a great timesaver and is particularly handy with repetitive chores.
Unlike Undo, Repeat works with most actions. The only exceptions are those actions you can’t logically repeat. For example, if you save a file by clicking the File tab and then Save, you can’t repeat the action. Whatever the case, Repeat reflects the last repeatable action.

## Editing cell contents

You can use the formula bar to edit the contents of a selected cell, or you can perform your editing “on location” in the cell. Excel also includes a few special features you can apply to tasks, such as entering date sequences, which once involved editing each cell but are now semiautomatic if you know where to find the “trigger.”

### Editing in cells or in the formula bar

While typing or editing the contents of a cell, you can use Cut, Copy, Paste, and Clear to manipulate cell entries. Often, retyping a value or formula is easier, but using commands is convenient when you’re working with long, complex formulas or with labels.

When you’re working in a cell or in the formula bar, these commands work just as they do in a word-processing program such as Word. For example, you can copy all or part of a formula from one cell to another. For example, suppose cell A10 contains the formula =IF(NPV(.15,A1:A9)>0,A11,A12) and you want to type =NPV(.15,A1:A9) in cell B10.

### Note

You can edit the contents of cells without using the formula bar. By double-clicking a cell, you can perform any formula bar editing procedure directly in the cell.

To do so, select cell A10, and in the formula bar, select the characters you want to copy—in this case, NPV(.15,A1:A9). Then press Ctrl+C, or click the Copy button (located in the Clipboard group on the Home tab). Finally, select cell B10, type = to begin a formula, and press Ctrl+V (or click the Paste button).

### Note

Excel does not adjust cell references when you cut, copy, and paste within a cell or in the formula bar. For information about adjustable references, see “How copying affects cell references” in Chapter 12.

When you type or edit formulas containing references, Excel gives you visual aids called range finders to help you audit, as shown in Figure 8-19, where we obviously have a
problem with our SUM formula. The total should include all the rows of data, so drag a handle on a bottom corner of the range-selection rectangle until it includes all the correct cells.

![Figure 8-19](image)

Double-click a cell containing a formula to edit it and to display range finders.

For more information about formulas, see Chapter 12. For more about auditing, see “Auditing and documenting worksheets” later in this chapter.

**Note**

You can disable in-cell editing if you want. To do so, click the File tab, click Options, and in the Advanced category, clear the Allow Editing Directly In Cells check box in the Editing Options area.

**Editing options**

The Advanced category in the Excel Options dialog box (which you access by clicking the File tab and then Options) contains an assortment of options that control editing-related workspace settings, as shown in Figure 8-20. These options include the following:

- **After Pressing Enter, Move Selection**  This locks in the entry and makes the cell below active. To change the direction of the selection after you press Enter, use the Direction drop-down list. When you clear this check box, pressing Enter locks in the entry and leaves the same cell active.

- **Automatically Insert A Decimal Point**  For those of us who remember using 10-key calculators, this is equivalent to the “floating point” setting. Ordinarily, you type numbers and decimal points manually. To have Excel enter decimal points for you, select this option, and then select the number of decimal places you want.
For example, when you type **12345** with two decimal places specified, Excel enters 123.45 in the cell. When you apply this option, Fixed Decimal appears in the status bar. This option applies only to entries you make after you select it, without altering existing data. It also applies only when you do not type a decimal point. If you type a number including a decimal point, the option has no effect.

![Figure 8-20](Image)

Figure 8-20  Click the File tab, Options, Advanced to display editing-related workspace settings.

- **Enable Fill Handle And Cell Drag-And-Drop**  This is required for the direct manipulation of cells using the mouse. See “Moving and copying with the mouse” earlier in this chapter. Leaving the Alert Before Overwriting Cells option selected is always a good idea.

- **Allow Editing Directly In Cells**  This is required for in-cell editing. See “Editing in cells or in the formula bar” earlier in this chapter.

- **Extend Data Range Formats And Formulas**  This lets Excel apply formatting from existing cells to new cells entered in a list or table.

- **Enable Automatic Percent Entry**  This helps you type values in cells with the Percentage format. When you select this check box, all entries less than 1 are multiplied by 100. When you clear this check box, all entries—including those greater than...
1—are multiplied by 100. For example, in a cell to which you already applied the Percentage format, typing either .9 or 90 produces the same result—90%—in the cell. If you clear the Enable Automatic Percent Entry check box, typing 90 results in the displayed value 9000% (as long as you applied the Percentage format to the cell).

**Note**

A quick way to apply the Percentage format to a clean cell is to type a number as a percentage. For example, type 1% in a cell, and the cell then displays subsequent numbers in the same Percentage format.

- **Enable AutoComplete For Cell Values**  This lets Excel suggest cell entries by comparing existing values it finds in the same column as you type. See “Letting Excel help with typing chores” later in this chapter.

- **Automatically Flash Fill**  This lets Excel suggest cell entries by comparing existing values it finds in adjacent columns as you type. See “Automatic parsing and concatenation using Flash Fill” later in this chapter.

- **Zoom On Roll With IntelliMouse**  Ordinarily, if your mouse has a wheel, rotating it causes the worksheet to scroll (or zoom while pressing Ctrl). Select this check box to switch the behavior of the wheel so that the worksheet zooms when you rotate the wheel (or scrolls while you press Ctrl).

- **Alert The User When A Potentially Time-Consuming Operation Occurs**  If an editing operation will affect a large number of cells, this option controls whether you are notified and lets you specify the number of cells it takes to trigger the notification.

- **Use System Separators**  Ordinarily Excel defaults to the designated numeric separators for decimals and thousands (periods and commas, respectively) specified by your Windows system settings. If you want to specify alternative separators, you can do so here.

- **Show Paste Options Button/Show Insert Options Buttons**  This activates the floating button menus that appear after pasting or inserting. Ordinarily, after you perform a paste or an insert operation, a floating button appears, offering a menu of various context-specific actions you can then perform. Clear these options to turn off these features.
Cut, Copy, And Sort Inserted Objects With Their Parent Cells  This is required to “attach” graphic objects to cells. See “Tools to help you position objects on the worksheet” in Chapter 10.

Understanding fixed and floating decimals

The Automatically Insert A Decimal Point option in the Advanced category of the Excel Options dialog box is handy when you need to type long lists of numeric values. (It’s equivalent to the floating-decimal feature available on most 10-key calculators.) For example, if you’re performing a lengthy data-entry task such as typing multiple dollar values on a worksheet, select the Automatically Insert A Decimal Point option, and click 2 in the Places list. Then just type numbers and press Enter, which saves you an extra keystroke for the decimal point in each entry. If you’re entering 1,000 values, typing 295 instead of 2.95 eliminates 25 percent of the keystrokes you would otherwise have to perform. However, you need to be careful to either type trailing zeros or add decimal points to some numbers. For example, you usually type 5 to enter a 5.00 value, but with two fixed decimal places turned on, the same entry becomes 0.05, making it necessary for you to type either 500 or 5. to correctly place the decimal point.

Filling cells and creating data series

As described earlier in this chapter, the fill handle has many talents to make it simple to enter data in worksheets. Uses of the fill handle include quickly and easily filling cells and creating data series by using the incredibly useful Auto Fill feature.

Take a look at Figure 8-21. If you select cell B2 and drag the fill handle down to cell B5, Excel copies the contents of cell B2 to cells B3 through B5. However, if you click the floating Auto Fill Options button that appears, right after you drag, you can select a different Auto Fill action, as shown in Figure 8-22 for the range C2:C5.

![Figure 8-21](image)

**Figure 8-21** Copy the contents of a cell to adjacent cells by dragging the fill handle.
Figure 8-22 Create a simple series by dragging the fill handle and then clicking Fill Series on the Auto Fill Options menu.

**INSIDE OUT**  
Create decreasing series

Generally, when you create a series, you drag the fill handle down or to the right, and the values increase accordingly. You can also create a series of decreasing values by dragging the fill handle up or to the left. Select the starting values in cells at the bottom or to the right of the range you want to fill, and then drag the fill handle back toward the beginning of the range.

If you click Fill Series on the Auto Fill Options menu, Excel creates the simple series 21, 22, and 23 instead of copying the contents of cell C2. If, instead of selecting a single cell, you select the range C1:C2 in Figure 8-22 and drag the fill handle down to cell C5, you create a series that is based on the interval between the two selected values, resulting in the series 30, 40, and 50 in cells C3:C5. If you click Copy Cells on the Auto Fill Options menu, Excel copies the cells instead of extending the series, repeating the pattern of selected cells as necessary to fill the range. Instead of filling C3:C5 with the values 30, 40, and 50, choosing Copy Cells will enter the values 10, 20, and 10 in C3:C5.

If you select a text value and drag the fill handle, Excel copies the text to the cells where you drag. If, however, the selection contains both text and numeric values, the Auto Fill feature takes over and extends the numeric component while copying the text component. You can also extend dates in this way, using a number of date formats, including Qtr 1, Qtr 2, and so on. If you type text that describes dates, even without numbers (such as months or days of the week), Excel treats the text as a series.
INSIDE OUT

Fill series limited to 255 characters

Excel lets you type up to 32,767 characters in a cell. However, if you want to extend a series using Auto Fill, the selected source cells cannot contain more than 255 characters. If you try to extend a series from an entry of 256 characters or more, Excel copies the cells instead of extending the series. This is not really a bug but a side effect of the Excel column-width limitation of 255 characters. Besides, a 256-character entry is not going to be readable on the screen anyway. If you really need to create a series out of humongous cell entries like this, perhaps a little worksheet redesign is in order. Otherwise, you have to do it manually.

Figure 8-23 shows some examples of simple data series created by selecting single cells containing values and dragging the fill handle. We typed the values in column A, and we extended the values to the right of column A using the fill handle. Figure 8-24 shows examples of creating data series using two selected values that, in effect, specify the interval to be used in creating the data series. We typed the values in columns A and B and extended the values to the right of column B using the fill handle. These two figures also show how Auto Fill can create a series even when you mix text and numeric values in cells. Also note that we extended the values and series in Figure 8-24 by selecting the entire range of starting values in cells A3:B12 before dragging the fill handle to extend them, showing how Excel can extend multiple series at once. (We applied the bold formatting after filling to make it easier to differentiate the starting values.)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>9:00</td>
<td>10:00</td>
<td>11:00</td>
<td>12:00</td>
<td>13:00</td>
<td>14:00</td>
<td>15:00</td>
</tr>
</tbody>
</table>

Figure 8-23 Create simple data series by selecting a single value and dragging the fill handle.