WORD 2013

Working with Tables

A table is one of Word's most useful tools for organizing and formatting text and numbers. Tables are flexible and easy to use. Word provides a variety of features that let you set up, modify, and format tables. In this lesson, you will merge and split table cells, sort rows, quickly apply table styles, and perform calculations within tables.

LEARNING OBJECTIVES

After studying this lesson, you will be able to:

- Insert a table in a document
- Modify, sort, and format tables
- Apply built-in table styles
- Perform calculations in tables
- Insert and size columns and rows

LESSON TIMING

- Concepts/Develop Your Skills: 2 hrs 00 min
- Concepts Review: 15 min
- Total: 2 hrs 15 min

CASE STUDY: CREATING TABLES FOR MY VIRTUAL CAMPUS

You are an administrative assistant for the product development team at My Virtual Campus. The team is always looking for new ideas to enhance the websites. You have a few ideas of your own that may be useful for students: a list of typical expenses with totals, and a simple layout for viewing class schedules. You decide to create tables to present your ideas at the next product development meeting.

Introducing Tables

Tables provide a convenient method of organizing and aligning data in an easy-to-read format, and they are a nice way to break up a text-heavy document. Using Word's table styles adds flair to your documents, and tables draw your reader's attention to key items.

Tables are organized in columns and rows. Where columns and rows intersect, they form a rectangle known as a cell. You can type text or numbers in cells, and you can even perform simple calculations.

Personal Expenses	Estimate	Actual	Difference
Food	425	435	$ 10.00
Entertainment	100	150	$ 50.00
Transportation/Gas	50	55	$ 5.00
Cell Phone	75	85	$ 10.00
Totals	650	725	$ 75.00

Contextual Tabs

Contextual tab(s) appear in context with the task you are performing. The Tables feature, as well as other Word features, uses contextual tabs. They appear on the Ribbon when the insertion point is in a table. The following illustration shows the Table Tools' Design and Layout tabs, where you can format tables.
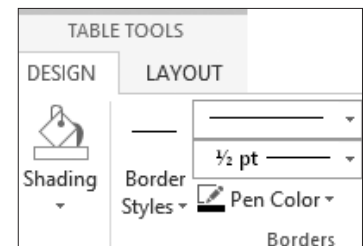
Navigating in a Table

You can move the insertion point by clicking in a cell, or you can use a variety of keystrokes for navigating.

| TABLE NAVIGATION KEYSTROKES	
Move To	**Keystroke**
Next cell	Tab
Previous cell	Shift + Tab
Next row	↓
Previous row	↑
Beginning of row	Alt + Home
End of row	Alt + End
Top of column	Alt + Page Up
End of column	Alt + Page Down

Navigate and Enter Data

1. Open **WD05-D01-StdntTables** from your **WD2013 Lesson 05** folder and save it as `WD05-D01-StdntTables-[FirstInitialLastName]`.

2. Position the insertion point in the first cell of the **Expense Table** on the first page.

3. Tap ⌈Tab⌉ twice to move to the end of the first row.

4. Tap ⌈Tab⌉ again to move the beginning of the second row.

5. Press ⌈Shift⌉+⌈Tab⌉ three times to move back one cell at a time.

6. Press ⌈Alt⌉+⌈End⌉ to move to the end of the row.

7. Press ⌈Alt⌉+⌈Home⌉ to move to the beginning of the row.

8. Test some other keystrokes.

9. Enter the following data in your table.

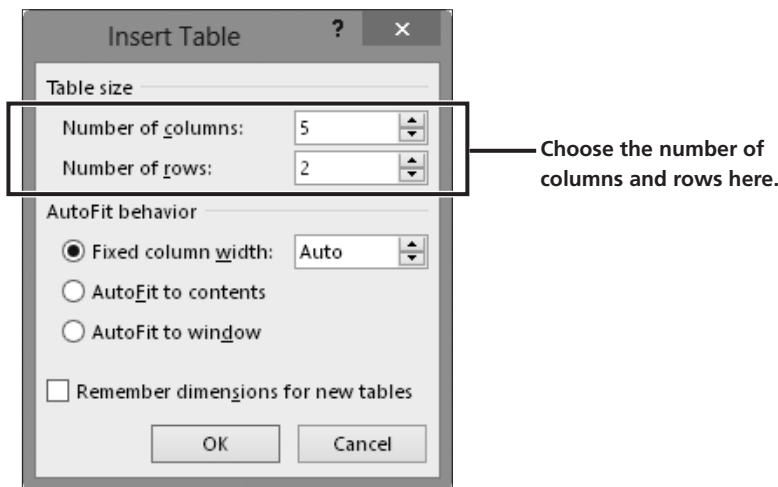| Personal Expenses	Estimate	Actual
Food	425	435
Entertainment	100	150
Transportation/Gas	50	55
Cell Phone	75	85

10. Save the file and leave it open; you will modify it throughout the lesson.
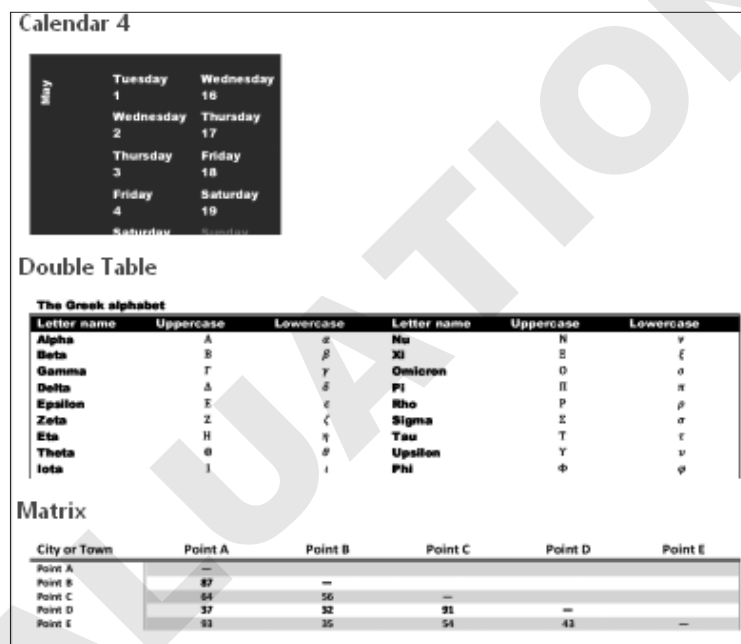
Inserting Tables

You can insert a table using the Table button, the Insert Table dialog box, and the Quick Tables gallery. You can even draw a table with the mouse pointer.

Drag in the grid to indicate the number of columns and rows.
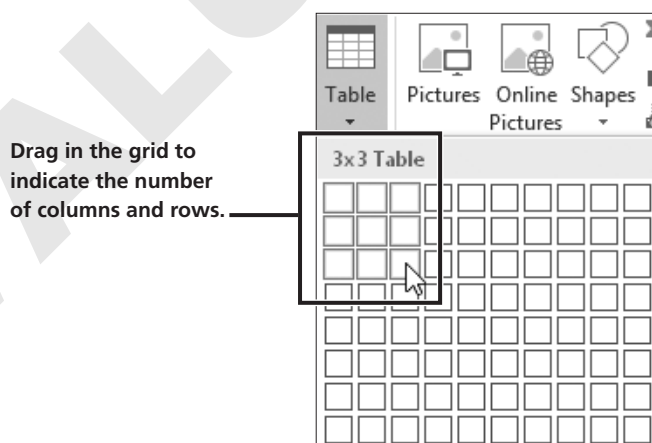
Using the Insert Table dialog box, you can choose various options for the table.

Choose the number of columns and rows here.

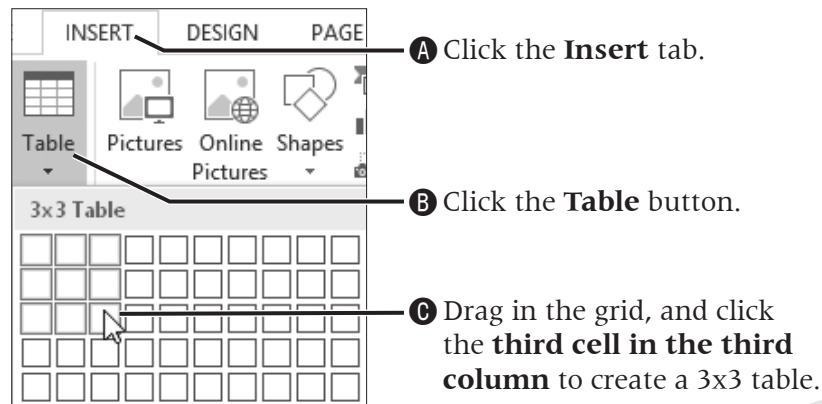The Quick Table gallery lets you choose predesigned tables, such as calendars and various table layouts.

DEVELOP YOUR SKILLS WD05-D02

Insert Tables

1. Save your file as **WD05-D02-StdntTables-[FirstInitialLastName]**.

2. If necessary, choose **Home→Paragraph→Show/Hide ¶** to display formatting marks.

3. Position the insertion point on the blank row below the *Schedule Planning* heading on page 2.
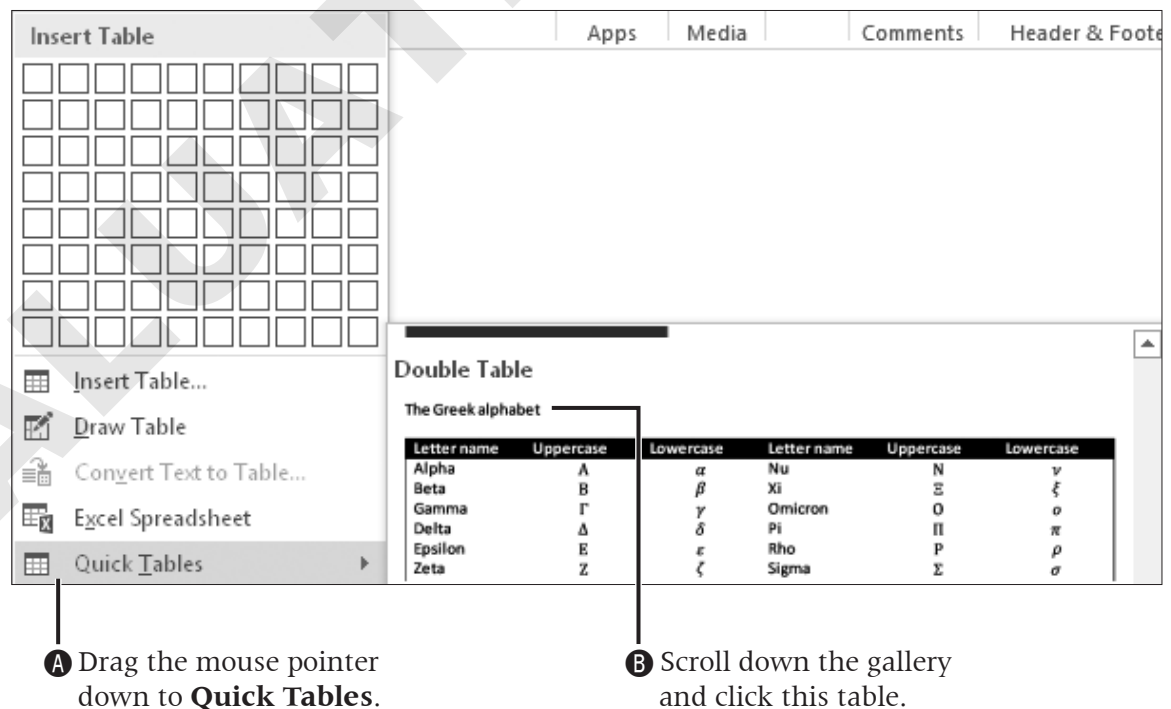
4. Follow these steps to insert a table:

Ⓐ Click the **Insert** tab.

Ⓑ Click the **Table** button.

Ⓒ Drag in the grid, and click the **third cell in the third column** to create a 3x3 table.

5. Enter the text shown, tapping ⎯Tab⎯ when you need to add a new row.

Course	Days	Units
Math	MWF	3
Science	MWF	3
International Tourism	TTH	2
Biology	TH	3
Biology Lab	W	1

6. Navigate to the top of page 4, and choose **Insert→Tables→Table** ▦.

7. Follow these steps to insert the table:

Ⓐ Drag the mouse pointer down to **Quick Tables**.

Ⓑ Scroll down the gallery and click this table.

8. Save your file.
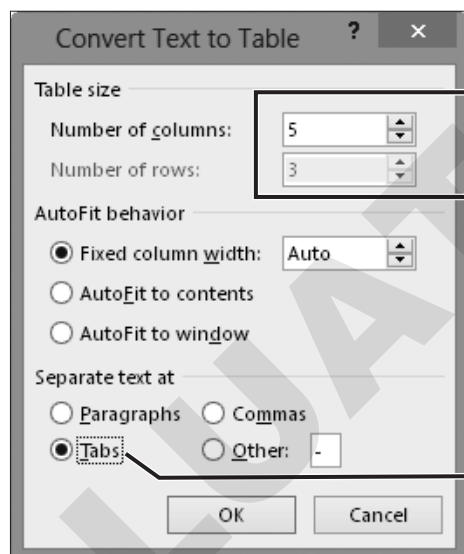
Converting Tables

Sometimes data is best set in tabular columns and sometimes it's best in a table. When you first begin laying out your data, you may not know which options to choose. Word's ability to convert from one to the other prevents you from having to start over.

Converting Text to a Table

Tabs are commonly used as separators in columnar tables. Note that there must only be one tab between columns for the conversion to work properly. When you convert, you are telling Word to replace each tab with a new table column.

This illustration shows a tabular table with one tab between columns.

Second·Semester·Schedule	→		→			→	¶
Class	→	Instructor	→	Day	→	Time →	Book·Price¶
Psychology	→	Hayes	→	MW	→	10:30–11:10 →	80¶

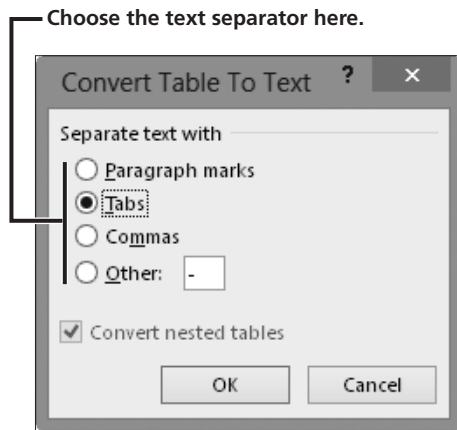**These settings indicate that Word will convert three selected rows into five columns.**

Word senses that the columns are separated by tabs.

Converting a Table to Text

You can specify whether the converted text should be separated by paragraph marks, tabs, commas, or another character that you specify.
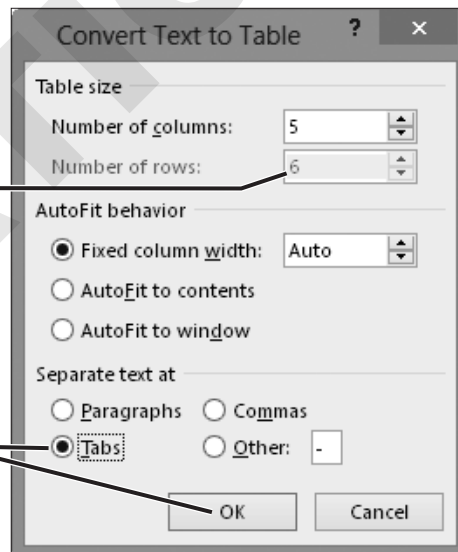
Choose the text separator here.

Convert Table To Text

Separate text with

○ Paragraph marks
● Tabs
○ Commas
○ Other: -

☑ Convert nested tables

OK   Cancel

DEVELOP YOUR SKILLS WD05-D03
Convert Text to a Table

1. Save your file as **WD05-D03-StdntTables-[FirstInitialLastName]**.

2. Scroll to page 3 and select all the rows, including the *Second Semester Schedule* heading.

3. Choose **Insert→Tables→Table** ▦, and choose **Convert Text to Table**.

4. Follow these steps to create a table from the selected text:

Convert Text to Table

Table size

Number of columns: 5

Number of rows: 6

Ⓐ Ensure the number of rows is **six**; if not, reselect the lines.

AutoFit behavior

● Fixed column width: Auto
○ AutoFit to contents
○ AutoFit to window

Separate text at

○ Paragraphs   ○ Commas
● Tabs   ○ Other: -

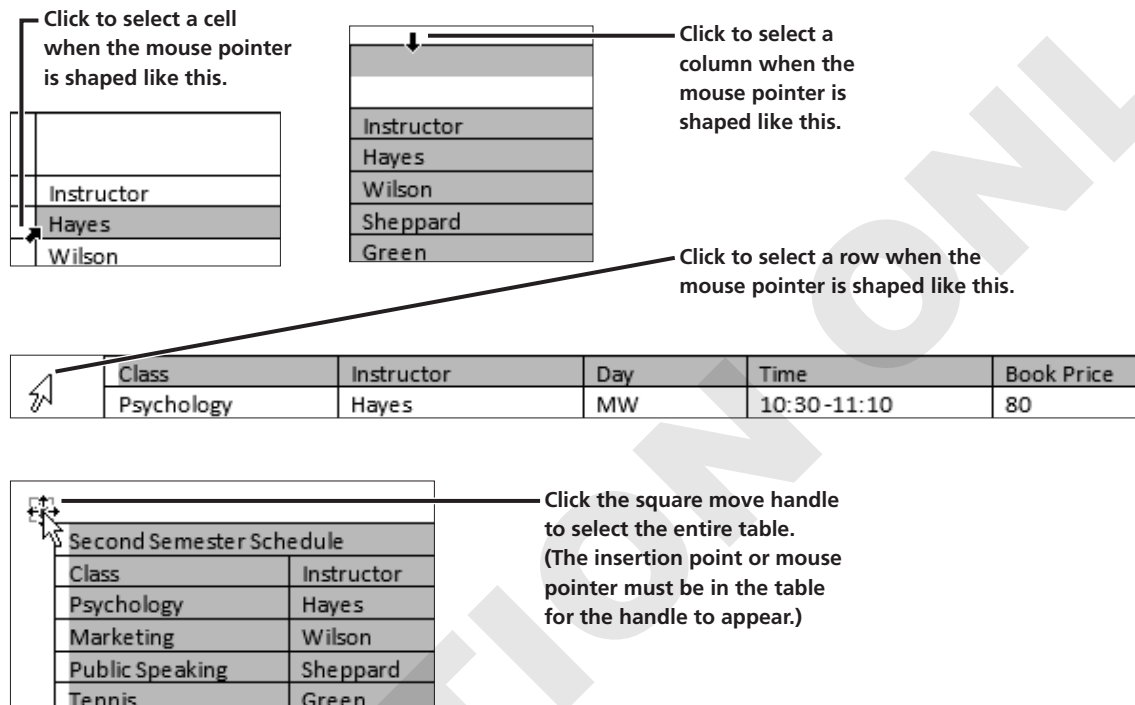**Ⓑ** Ensure that **Tabs** is marked and click **OK**.

OK   Cancel

5. Click in any table **cell**.

6. Choose **Table Tools→Layout→Data→Convert to Text** ▦. When the dialog box appears, verify that **Tabs** is chosen and click **OK**.

7. Click **Undo** ↻ to return the text to table format.
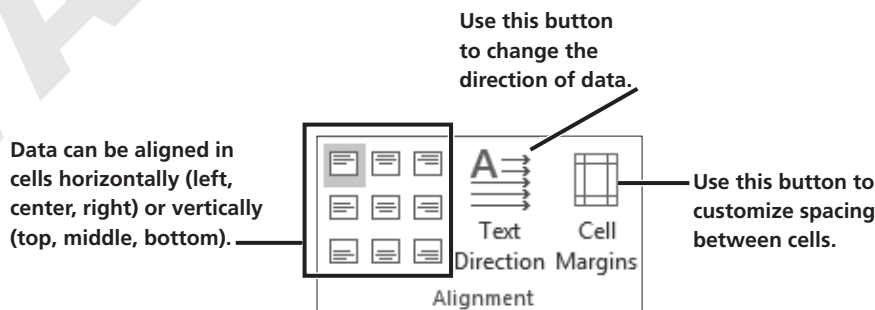
8. Save the file.

Selecting Data in a Table

The mouse pointer changes shape depending on whether you're selecting a cell, row, column, or the entire table. The following illustrations display the various pointer shapes when selecting in a table.

Click to select a cell when the mouse pointer is shaped like this.

Click to select a column when the mouse pointer is shaped like this.

Click to select a row when the mouse pointer is shaped like this.

Click the square move handle to select the entire table. (The insertion point or mouse pointer must be in the table for the handle to appear.)

Customizing Alignment, Direction, and Cell Margins

Data can be aligned horizontally or vertically, and you can change the direction of text. You can also modify the cell margins. These commands are found in the Alignment group on the contextual Layout tab that appears when the insertion point is positioned in a table.
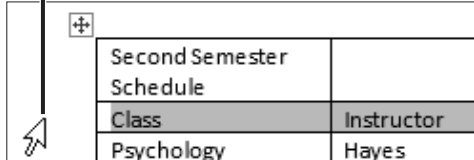
Use this button to change the direction of data.

Data can be aligned in cells horizontally (left, center, right) or vertically (top, middle, bottom).

Use this button to customize spacing between cells.
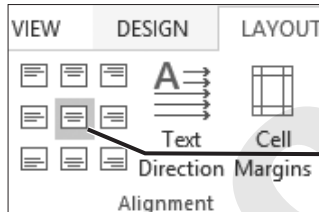
DEVELOP YOUR SKILLS WD05-D04

Select and Align Data, and Modify Cell Margins

1. Save your file as **WD05-D04-StdntTables-[FirstInitialLastName]**.
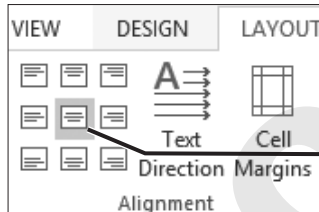
2. Follow these steps to center the heading row data:

Ⓐ Position the mouse pointer in the margin left of the second row and click when the mouse pointer looks like this.
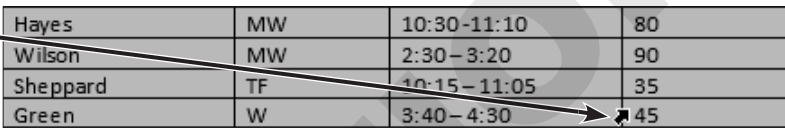
Ⓑ Choose the **Layout tab**.
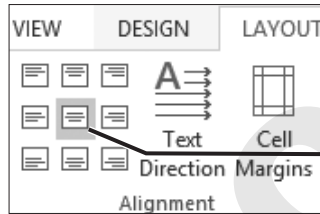
Ⓒ Click **Align Center**.

3. Follow these steps to center the data in a range of cells:

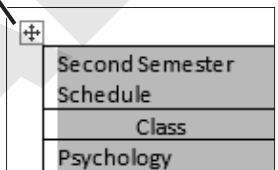**Ⓐ** Click and drag to select these cells.

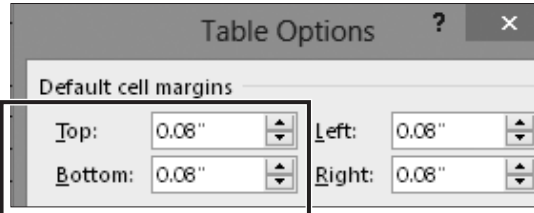**Ⓑ** Choose **Table Tools→Layout→ Alignment→ Align Center**.

4. Select the **second row**.

5. Choose **Table Tools→Layout→Alignment→Text Direction** twice to change to vertical with the text facing to the right.

6. Click **Undo** twice to change back to horizontal alignment.

7. Follow these steps to increase the distance between the text and cell borders:

Ⓐ Click the **Move** handle to select the entire table.

Ⓑ Choose **Table Tools→Layout→Alignment→Cell Margins**.

**Ⓒ** Enter **0.08** for the Top and Bottom margins and click **OK**.

8. Save your file.

Merging and Splitting Cells

You can merge two or more adjacent cells in the same row or column into a single cell. The merge option is often used to center a heading across the top of a table. You can also split a single cell into multiple cells.

A dialog box, shown in the following illustration, appears when you click the Split Cells button so you can determine the specifics of your split.

The contextual Layout tab containing the Merge Cells and Split Cells commands appears when the insertion point is in a table.
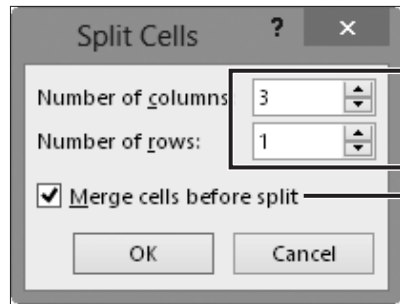
Specify the number of columns/rows to create from the split.

If you select multiple cells, they will be merged before splitting into specified columns/rows.
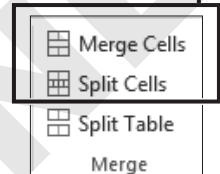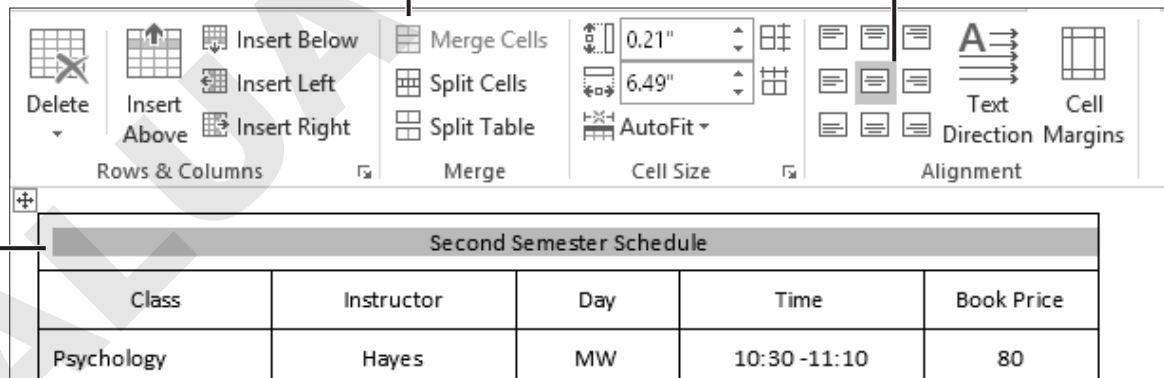

DEVELOP YOUR SKILLS WD05-D05

Merge and Split Cells in a Table

1. Save your file as **WD05-D05-StdntTables-[FirstInitialLastName]**.

2. Follow these steps to merge the table row and center the title:

A Select the first row.   **B** Click the **Layout** tab and click **Merge Cells**.   **C** Click **Align Center**.

Second Semester Schedule				
Class	Instructor	Day	Time	Book Price
Psychology	Hayes	MW	10:30 -11:10	80

3. With the first row still selected, choose **Table Tools→Layout→Merge→Split Cells** ⊞.

4. When the dialog box opens, choose **three columns** and **one row**; click **OK**.

5. Click **Undo** ↶ to merge the cells again.

6. With the first row still selected, choose **Table Tools→Layout→Data→Convert to Text**.

7. Verify that **Paragraph Marks** is chosen and click **OK**.

8. Save the file.

Formatting with Borders, Shading, and Styles

Borders, shading, and styles can enhance the readability of a table, and they add pizzazz. These tools are conveniently located on the contextual Design tab that appears when the insertion point is in a table. The Borders and Shading buttons have memory, meaning they reflect the last option chosen in the current session. This is convenient if you want to apply the same effect multiple times. Newly created tables have borders by default.

Contextual Design tab.

Table Styles gallery.

Shading button.

Borders button.
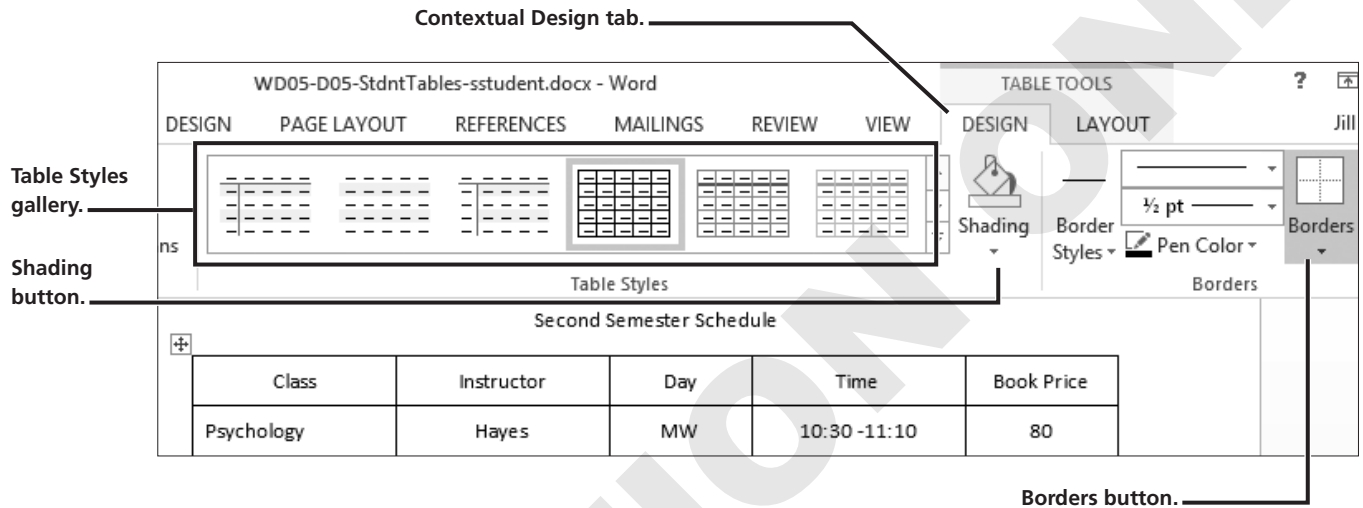
Modifying Formats

Just like regular text, you can easily modify table formats using the formatting tools on the Home tab. Or use the *Mini toolbar*, which provides convenient formatting tools right at your mouse pointer when you select data.

DEVELOP YOUR SKILLS WD05-D06
Use Borders, Shading, and Styles

1. Save your file as **WD05-D06-StdntTables-[FirstInitialLastName]**.

2. Click the **move handle** in the upper-left corner of the Second Semester Schedule table to select it.

3. Choose **Table Tools→Design→Borders→Borders ⊞ menu button ▼** and choose **No Border**.

4. Select the **first table row**, choose **Table Tools→Design→Borders→Borders** ⊞ **menu button** ▼, and choose **Outside Borders**.

5. Keep the first row selected and choose **Table Tools→Design→Table Styles→Shading** ⬧ **menu button** ▼.

6. Choose the third color in the third column, **Tan, Background 2, Darker 25%**.

7. Make sure the insertion point is in the table, and choose **Table Tools→Design→Table Styles**.

8. Click the **scroll buttons** to look through the gallery, and then hover the **mouse pointer** over several styles to see a **Live Preview** of the styles.
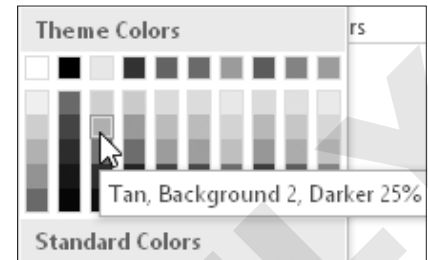
Scroll buttons.
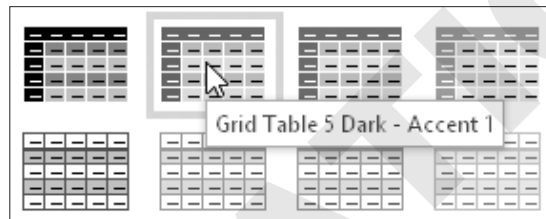
9. Click the **More** ▾ button below the scroll buttons to open the gallery and choose **Grid Table 5 Dark – Accent 1** (toward the bottom of the gallery).

Grid Table 5 Dark - Accent 1

10. Select the first row of the table; choose **Home→Font→Font menu button** ▼ and choose **Century Gothic**.

11. With the first row still selected, choose **Home→Font→Font Size menu button** ▼ and choose **12 points**.

12. Save the file.

Sorting Data in a Table

The Sort button in the Data group on the contextual Layout tab opens the Sort dialog box, which provides options to sort one or more columns in ascending or descending order, and choose whether the first row of the table contains column headings.

You can choose to sort a table by up to three levels. For example, say you have a table containing column headings for city, state, and zip. You can have Word sort the table first by state, then by city within state, and then by zip code within city for a three-level sort.

Choose to sort on one or more columns.

Specifying a header row excludes that row from the sort.

You can choose Ascending or Descending for each sort level.
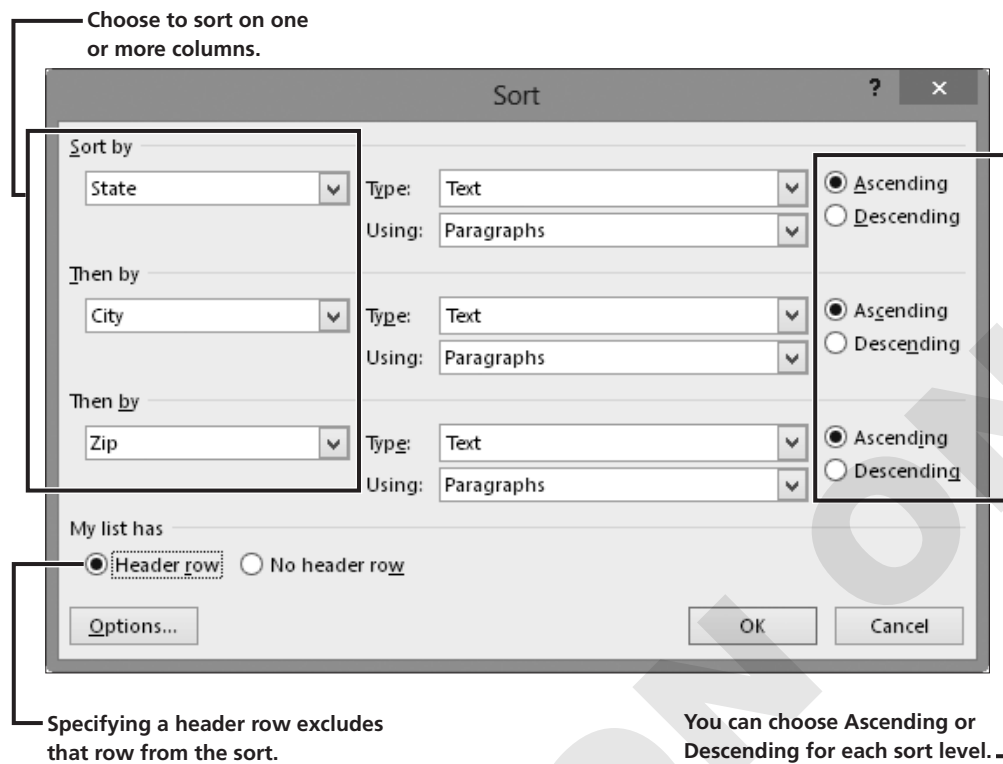
DEVELOP YOUR SKILLS WD05-D07

Sort Table Rows

1. Save your file as **WD05-D07-StdntTables-[FirstInitialLastName]**.

2. Position the insertion point in any cell in the **Second Semester Schedule** table.

3. Choose **Table Tools→Layout→Data→Sort** ⍗.

4. Follow these steps to sort the table:

Ⓐ If necessary, choose **Header Row**.

Ⓑ Choose **Book Price** here.

Ⓒ Word automatically sensed the data Type as **Number**.

Sort dialog:

Sort by Book Price **Type:** Number **⦿ Ascending ○ Descending**
Using: Paragraphs

Then by **Type:** Text **⦿ Ascending ○ Descending**
Using: Paragraphs

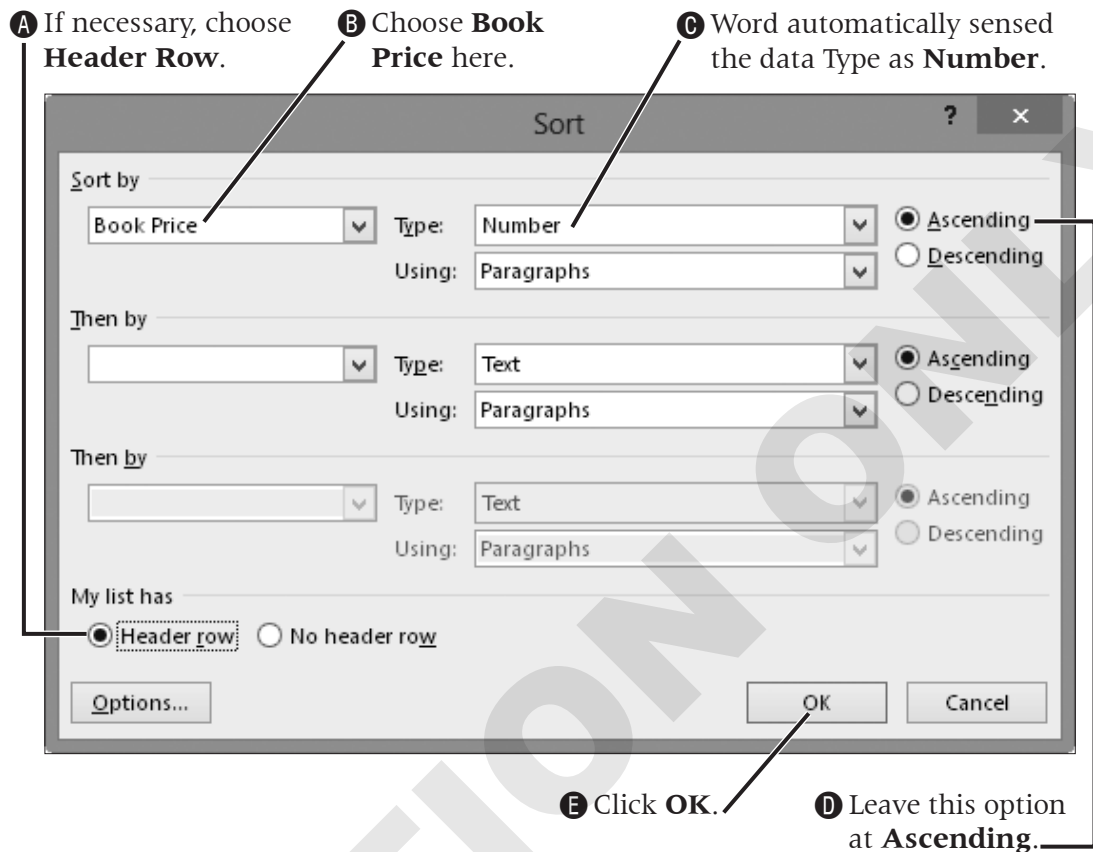**Then by** Type: Text ⦿ Ascending ○ Descending
Using: Paragraphs

My list has ⦿ Header row ○ No header row

Options...   OK   Cancel

Ⓔ Click **OK**.

Ⓓ Leave this option at **Ascending**.

5. Choose **Table Tools→Layout→Data→Sort** again.

6. In the Sort dialog box, make sure **Header Row** is chosen, choose **Class** from the Sort By list, and click **OK**.

7. Save your file.

Inserting Rows and Columns

You can insert columns and rows in an existing table. If you wish to insert multiple columns or rows, you must first select the same number of existing columns or rows as you wish to insert. For example, to insert two new rows, select two existing rows.

You can use the buttons in the Rows & Columns group on the Layout tab to insert columns and rows, or you can use the drop-down menu that appears when you right-click a selected column or row.

Rows & Columns tools.   **Menu choices that appear when you right-click a selected column or row.**
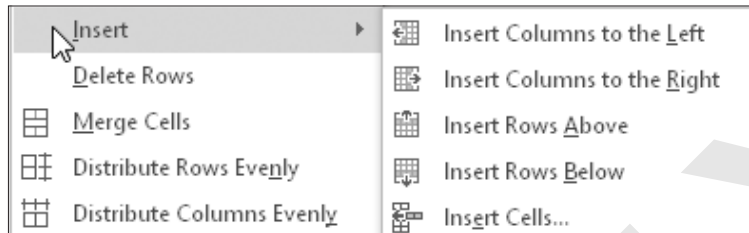
A quick and easy way to insert a column or row is with the Insert Control that appears when the insertion point is in the table and you move the mouse pointer between two columns or rows, as shown here.

Click the Insert Control to insert a column.   **Click the Insert Control to insert a row.**

Personal Expenses	Estimate
Food	425
Entertainment	100
Transportation/Gas	50
Cell Phone	75

Personal Expenses	Estimate
Food	425
Entertainment	100
Transportation/Gas	50
Cell Phone	75

Moving Rows and Columns

You can move a row or column by using the Cut and Paste commands or by using the mouse to drag and drop. When you select the entire row or column and move it to another location, Word automatically makes room for the selection by moving the other rows down or the other columns to the right.

If you select an individual cell within a row or column, when you paste, Word replaces any existing data in the cell. You can prevent data loss by inserting a blank row or column prior to moving.

DEVELOP YOUR SKILLS WD05-D08

Insert Rows and a Column

1. Save your file as **WD05-D08-StdntTables-[FirstInitialLastName]**.

2. Position the mouse pointer to the left of the **Marketing** row until it becomes the white arrow.

3. Click and drag down to select the **Marketing and Psychology** rows.

4. Choose **Table Tools→Layout→Rows & Columns→Insert Above** to insert two new rows above the Marketing row.

5. Add the following data to the new blank rows:

Geometry	Bailey	MW	12:00 − 12:50	94
Geometry Lab	Johnson	TTH	9:00 − 9:50	35

6. Follow these steps to insert a new column:

Ⓐ Position the mouse pointer here to display the Insert Control.

Ⓑ Click the **Insert Control**.

Class	Instructor
Geometry	Bailey
Geometry Lab	Johnson
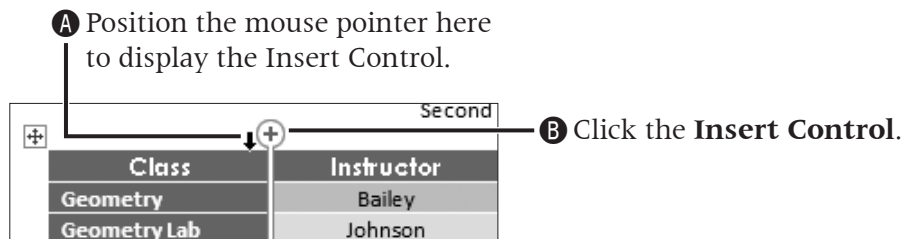
7. Type **Course #** as the new column heading.

8. Enter the following data in the column.
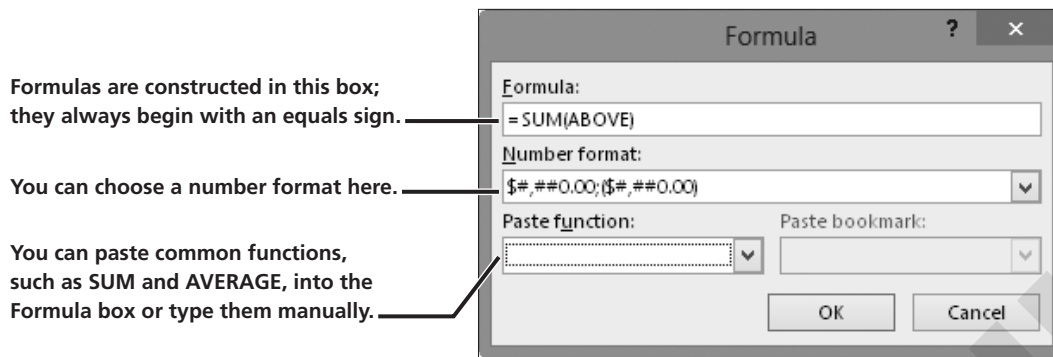
Course #
500334
500335
200021
605221
123356
988290

9. Scroll back up to the *Expense Table* on page 1 and position the insertion point in the **Actual** column.

10. Choose **Table Tools→Layout→Rows & Columns→Insert Right** 🔲.

11. Type **Difference** as the new column heading; save the file.

Performing Calculations in Tables

When the Formula dialog box opens, it displays the Sum function. The Sum function recognizes whether there are numbers in the cells above or to the left of the formula cell and indicates that in the formula automatically. However, sometimes you may need a formula for something other than addition. In that case, you use cell addresses in the formula. Although the columns and rows are not lettered or numbered as they are in Excel, which is the Microsoft application designed to "crunch numbers," you must use cell addresses for certain calculations in a table. The first cell in a table is considered to be cell A1 (first column, first row).

Word's formulas are not nearly as sophisticated as Excel's; however, they are adequate for simple calculations.

Formulas are constructed in this box; they always begin with an equals sign.

You can choose a number format here.

You can paste common functions, such as SUM and AVERAGE, into the Formula box or type them manually.

Constructing Formulas

You construct formulas by typing directly into the Formula dialog box. In Word, formulas can contain a combination of the following elements.

■ **Arithmetic operators:** The most common arithmetic operators are + (addition), – (subtraction), / (division), and * (multiplication). For more complex formulas, use Microsoft Excel and copy and paste into Word.

■ **Cell addresses:** In Word tables, columns are labeled A, B, C, etc., and rows are numbered 1, 2, 3, etc. Each cell has an address formed by the column letter and row number. For example, cell A1 refers to the cell in column A and row 1. You can use cell references in formulas. For example, the formula =D2–C2 subtracts the number in cell C2 from the number in cell D2.

■ **Functions:** Functions are predefined formulas that perform calculations on cells. The most common functions are SUM, AVERAGE, MIN, and MAX.

A function is followed by a set of parentheses in which you enter arguments. Arguments include numbers, cell addresses, a range of cells, or direction references (see next bullet).

A range of cells is separated by a colon. For example, to include cells C2, C3, and C4 only in a formula, you would type C2:C4.

■ **Direction references:** In Word, functions can use direction references to indicate cell ranges. The direction references are ABOVE, BELOW, LEFT, and RIGHT. As an example, the formula =SUM(ABOVE) would sum all numbers above the cell containing the formula.
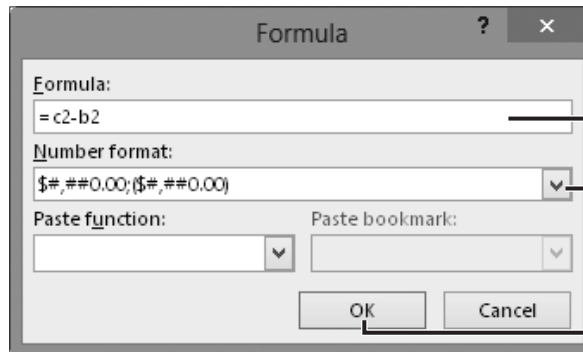
DEVELOP YOUR SKILLS WD05-D09

Construct Formulas

1. Save your file as **WD05-D09-StdntTables-[FirstInitialLastName]**.

2. Click in the **second row** of the *Difference* column.

3. Choose **Table Tools→Layout→Data→Formula** f_x.

4. Follow these steps to create a formula to subtract the *Estimate* from the *Actual* expense:
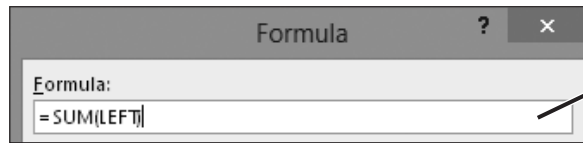
Ⓐ View the proposed formula, =SUM(LEFT), and then delete it.

Ⓑ Type **=c2-b2** here.

Ⓒ Click here and choose the **third format**.
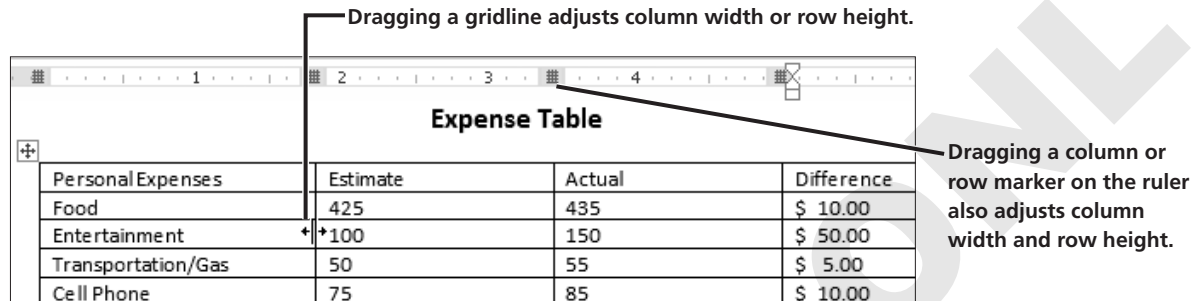
Ⓓ Click **OK**.

5. Click in the cell beneath the formula.

6. Choose **Table Tools→Layout→Data→Formula** f_x.

7. Remove the proposed formula and type **=c3-b3**.

8. Click the **Number Format** menu arrow, choose the **third format**, and click **OK**.

9. Enter formulas in the remaining rows in the *Difference* column choosing the same format as before.

10. Position the insertion point in the last table cell and tap ⎡Tab⎤ to create a new row.

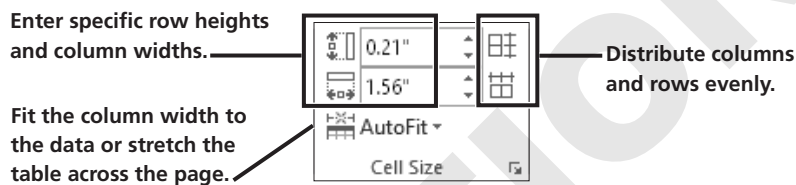| Personal Expenses	Estimate	Actual	Difference
Food	425	435	$ 10.00
Entertainment	100	150	$ 50.00
Transportation/Gas	50	55	$ 5.00
Cell Phone	75	85	$ 10.00

11. Type **Totals** in the first cell and tap ⎡Tab⎤ to move to the next cell.

12. Choose **Table Tools→Layout→Data→Formula** f_x.

13. Click **OK**.

14. Calculate the total for *Actual* column with no formatting.

15. Calculate the total for the *Difference* column and add the same formatting as the other numbers in the column.

16. Save the file.

Sizing Rows and Columns

You can easily resize columns and rows in a table. Word offers a variety of techniques for this. The adjust pointer, a double-headed arrow, appears whenever you position the mouse pointer on a row or column gridline. You can adjust the column width and row height by dragging the gridline.
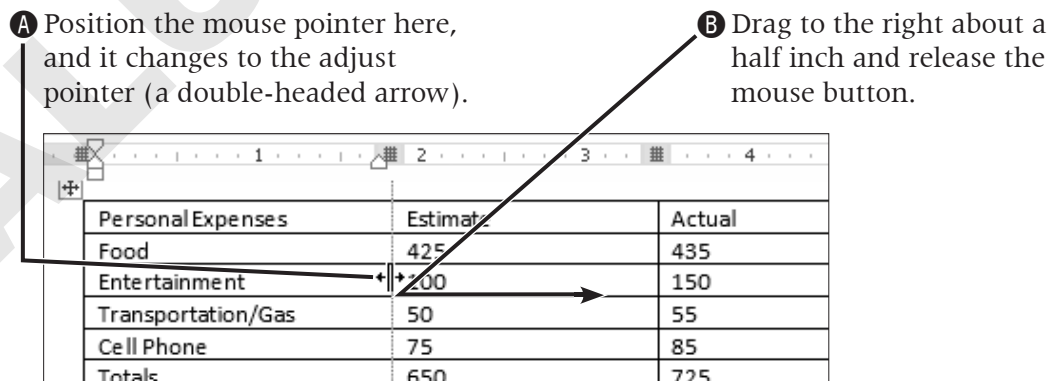
Dragging a gridline adjusts column width or row height.

Expense Table

Personal Expenses	Estimate	Actual	Difference
Food	425	435	$ 10.00
Entertainment	100	150	$ 50.00
Transportation/Gas	50	55	$ 5.00
Cell Phone	75	85	$ 10.00

Dragging a column or row marker on the ruler also adjusts column width and row height.

The Cell Size group in the contextual Layout tab provides handy tools for working with column and row sizes.

Enter specific row heights and column widths.

0.21"
1.56"

Distribute columns and rows evenly.

Fit the column width to the data or stretch the table across the page.

AutoFit

Cell Size

DEVELOP YOUR SKILLS WD05-D10
Adjust Column Widths

1. Save your file as **WD05-D10-StdntTables-[FirstInitialLastName]**.

2. Follow these steps to change the width of the first column:

A Position the mouse pointer here, and it changes to the adjust pointer (a double-headed arrow).

B Drag to the right about a half inch and release the mouse button.

Personal Expenses	Estimate	Actual
Food	425	435
Entertainment	200	150
Transportation/Gas	50	55
Cell Phone	75	85
Totals	650	725

3. Follow these steps to distribute the last three columns evenly:

Ⓑ Drag right to select all three columns.

Ⓐ Position the mouse pointer at the top of this column. (It should appear as a small black arrow.)

Estimate	Actual	Difference
425	435	$ 10.00
100	150	$ 50.00
50	55	$ 5.00
75	85	$ 10.00
650	725	$ 75.00

4. Choose **Table Tools→Layout→Cell Size→Distribute Columns** ⊞ to make the selected columns the same size.

5. Scroll to the **Schedule Planning table** on **page 2** and select the **entire table**.

6. Choose **Table Tools→Layout→Cell Size→AutoFit** 🔲, and choose **AutoFit Contents**.

7. Save and close the file. Exit **Word**.

Concepts Review

To check your knowledge of the key concepts introduced in this lesson, complete the Concepts Review quiz on the student resource center.