

Working with Large Worksheets



LESSON OUTLINE

- 7.1 Sorting Worksheet Data
- 7.2 Using Flexible Worksheet Views
- 7.3 Printing Multipage Worksheets
- 7.4 Concepts Review

Reinforce Your Skills

Apply Your Skills

Critical Thinking & Work-Readiness Skills

LEARNING OBJECTIVES

After studying this lesson, you will be able to:

- Sort worksheet rows in alphabetic and numeric order
- View nonadjacent areas of large worksheets and view multiple worksheets simultaneously
- Set printing options to center and fit the worksheet on one page
- Set options to print a worksheet on multiple pages

In this lesson, you will learn several techniques for working with large worksheets. You will sort the worksheet rows in alphabetic or numeric order. You will freeze headings, split the worksheet window to compare data from separate areas of the worksheet, and view two worksheets side by side. You will set print options, including margins, scaling, headers, and footers. For worksheets that cannot print on one page, you will set headings to print on each page and adjust page breaks.

Student Resources

labyrinthlab.com/excel10

CASE STUDY

Managing Large Worksheets

My Virtual Campus Corporation sells its web application, a social networking intranet, to colleges and universities. Students, alumni, faculty,

and staff can use this website to communicate with others, advertise campus events, collaborate on projects, post job opportunities, and so forth. Roxana Ortega is a sales analyst who provides support to college and university accounts to ensure customer satisfaction and build new product sales. She has created an Excel workbook containing website usage data for Seaview College.



My Virtual Campus

Roxana will sort the records by category. She will set worksheet views to compare data in her large worksheet more easily. To prepare for printing the worksheet, Roxana will set several options for reading the data across multiple pages. These options include a header and titles in rows and columns that print on every page to label the data.

Names sorted alphabetically within the Alumni category

	A	B	C	D	E	F
1	Seaview College Usage Report					
2				Year 1		
3						
4	Last Name	First Name	Category	Jan	Feb	Mar
5	Do	Alan	Alumni	0.0	0.0	0.0
6	Johnson	Chriss	Alumni	0.0	0.0	3.5
7	Nguyen	Jimmy	Alumni	0.0	2.0	0.0
8	Amal	Asan	Faculty	1.5	0.0	0.0
9	Kim	Tae Joon	Faculty	0.0	0.0	0.0
10	Kissinger	Dorothy	Faculty	14.0	17.5	36.0

The usage report sorted by category with names alphabetized within each category

Header

Title rows

Title columns

Years 1-2, Seaview College Usage Report								
Seaview College Usage Report								
Last Name	First Name	Category	Aug	Sep	Oct	Nov	Dec	Totals
Do	Alan	Alumni	0.0	0.0	2.5	0.0	3.0	79.0
Johnson	Chriss	Alumni	2.0	4.5	11.5	13.0	7.0	84.5
Nguyen	Jimmy	Alumni	0.0	0.0	0.0	2.0	3.0	24.5

Page 2 of the printed report with a header and repeating titles that identify the data on every page

7.1 Sorting Worksheet Data

Video Lesson

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When your worksheet must be organized in alphabetic or numeric order, Excel can easily sort the list. Rather than adding new records by inserting blank rows one by one within the list, you may enter the records at the end of the list and then sort the entire list. Excel can order the list based on the data in any single column that you select. For example, you may sort by name, date, item number, or dollar amount. By using the Sort command on the Ribbon, you may sort by multiple columns. In the following example, records with the same last name are then sorted by first name.

An unsorted list

Last Name	First Name
Do	Alan
Johnson	Chriss
Nguyen	Jimmy
Amal	Asan
Kim	Tae Joon
Kissinger	Dorothy
Lang	Thomas
Malinski	Ashton

Last Name	First Name	Category
Abbott	Ami	Student
Amal	Asan	Faculty
Basinger	Stephon	Student
Do	Alan	Alumni
Do	Ty	Staff
Garcia Moreno	Juan	Staff
Harris	Patti	Staff
Johnson	Chriss	Alumni



The list after sorting on two columns with names in alphabetic order

A sort is performed on all adjacent rows. If your worksheet contains totals below the data rows, insert a blank row between the two sections to avoid including the total row in the sort. You may, however, select only certain rows to sort when necessary.



If a sorting problem arises and Undo is unavailable, just close the workbook without saving it. Reopen the workbook to restore its original appearance.

Sorting by a Single Column

The Sort A to Z  and Sort Z to A  buttons let you sort quickly by one column. Sort A to Z will sort records in ascending order from lowest to highest, and Sort Z to A sorts in descending order from highest to lowest. Excel sorts all rows in the contiguous list unless it determines that the list has a header row. A header row is the row at the top of a list that contains column headings.








If you often perform sorts, remember that you may add the Sort A to Z and Sort Z to A buttons to the Quick Access toolbar.

Sorting Selected Rows

If the list contains rows you do not want included in the sort, you must select the rows you *do* want sorted before selecting one of the sort buttons. Excel will use column A as the sort key by default.



To keep the data together for each record, always select *one cell* in a column or *entire rows* before sorting. Do not attempt to sort by highlighting several cells in one column, such as the last names. The names would be in sequence, but the other cells belonging to each record would not move—a data disaster.


QUICK REFERENCE	SORTING WORKSHEET DATA
Task	Procedure
Sort by a single column	<ul style="list-style-type: none"> ■ Select one cell in the desired column on or under the header row. ■ Choose Data→Sort & Filter and choose one of the following from the Ribbon: <ul style="list-style-type: none"> ◆ Sort A to Z  ◆ Sort Z to A 
Sort selected rows by a single column	<ul style="list-style-type: none"> ■ Select a cell in the sort key column. ■ Select the rows to be sorted. ■ Choose Data→Sort & Filter and choose one of the following from the Ribbon: <ul style="list-style-type: none"> ◆ Sort A to Z  ◆ Sort Z to A 
Sort by multiple columns	<ul style="list-style-type: none"> ■ Choose Data→Sort & Filter→Sort  from the Ribbon. ■ Choose the first column to be sorted from the Sort By list and change the Sort On and Order settings, if necessary. ■ Click the Add Level button to add a second sort category and change its settings, if necessary. ■ If desired, add more sort levels. ■ If the list to be sorted has a header row, place a checkmark next to My Data Has Headers. ■ Click OK.


DEVELOP YOUR SKILLS 7.1.1

Sort by One Column

In this exercise, you will use the sort buttons to sort a list in a workbook.

Sort Entire Lists

1. **Open** the Seaview College Usage Report workbook from the Lesson 07 folder in your file storage location.
2. If necessary, **maximize**  the window and click the **Years 1-2** sheet tab to display the worksheet.
3. Take a few moments to browse through this worksheet.
Notice that this worksheet is very large and contains monthly hours of website usage for a two-year period. You will use this worksheet throughout this lesson.
4. Scroll to the top of the worksheet and select **cell A5**.
Notice that the rows are not in alphabetical order. In the next few steps, you will sort rows 5–42. The rows will be sorted by last name in column A because you selected a cell in this column. Keep in mind, however, that all the data in each row will stay together. Before you begin, notice that row 5 (Thomas Lang) has the Faculty category in cell C5 and the value 4.5 in cell D5.

5. Choose **Data→Sort & Filter→Sort A to Z**  from the Ribbon. (Take care not to confuse this button with the Sort button on the Ribbon. Cancel the Sort dialog box if you opened it by mistake.)

The Ami Abbott row is now on top because it is the first row in alphabetic order. Also notice that the entire rows have been rearranged. For example, the Thomas Lang row is now in the middle of the list and his data, Faculty and 4.5, are still part of that row. Notice that the header row 4 was not included in the sort. Finally, notice that the total row 44 was not included because a blank row separates the totals from the data rows.

6. Choose **Data→Sort & Filter→Sort Z to A**  from the Ribbon to reverse the sort order.

7. **Scroll** to the right until the totals on the right side of the spreadsheet are visible, as shown at right.

Z	AA	AB	AC
Nov	Dec	Totals	
0.0	3.0	79.0	
13.0	7.0	84.5	
2.0	3.0	24.5	
15.0	9.5	99.0	

8. Select **cell AB5**.

9. Choose **Data→Sort & Filter→Sort A to Z**  from the Ribbon to sort the rows based on the total hours in column AB.

The Sort A to Z and Sort Z to A buttons always sort rows based on the column that contains the pointer.

10. Choose **Data→Sort & Filter→Sort Z to A**  from the Ribbon to sort in descending order based on total hours.

11. Scroll to the left until **column A** is visible.

12. Select **cell A5**, and then choose the **Sort A to Z**  button.

13. **Save**  the changes.

Inadvertently Include Totals in a Sort

A blank row separates the list from the totals rows. Let's see what happens without a blank row.

14. **Scroll down**, as shown in the following illustration, until the **totals** are visible.

40	Sufi	Seri	Student	7.0	2.0	16.0	4.5	13.0	8.0
41	Tejani	Sabrina	Student	10.0	8.5	16.0	8.0	10.0	0.0
42	Zorn	Paul	Student	13.0	8.0	4.0	2.0	14.0	3.5
43									
44	Month Totals			303.5	366.5	396.0	292.0	327.5	199.0
45									

15. Point to the row selector for **row 43**, **right-click**, and choose **Delete** from the pop-up (or context) menu.
The blank row is deleted, and the rows containing totals now are a part of the list.

42	Zorn	Paul
43		
44	Month Totals	

16. Select **cell A39**, and then choose **Data→Sort & Filter→Sort A to Z**  from the Ribbon.

Notice that Excel included the totals rows in the sort with one total row now in row 34.

17. **Undo**  the sort.

Next you will select rows 5–42 and sort. Because the first and last rows do not display on the same screen, dragging to select rows would be difficult.

Sort Selected Rows

When no blank row separates the list from the totals, select only the rows to be sorted.

18. Select **cell A5** to set column A as the sort key.

19. Follow these steps to select rows 5–42:

A Click the row selector for row 5.


B Scroll down until the bottom of the list is visible.

C Hold down **[Shift]** and select the row selector for row 42.

4	Last Name	First Name	Category	Jan
5	Abbott	Ami	Student	18.5
6	Amal	Asan	Faculty	1.5
41	Tejani	Tabriz	Faculty	0.0
42	Zorn	Paul	Student	13.0
43	Month Totals			303.5

D Release the **[Shift]** key.

Rows 5–42 should appear highlighted. Make certain that entire rows are selected. If you select only certain cells in the rows, such as the names in the range A5:A42, Excel will sort only those cells. The data would not match the names and would be useless.

20. Choose **Data→Sort & Filter→Sort A to Z**  from the Ribbon.

Only the selected student data rows are sorted. You did not include the totals in your selection.

21. **Right-click** the row selector for row 43, and choose **Insert** from the context menu to insert a blank row that separates the data from the totals row.

Inserting the blank row will ensure that totals are not included in future sorts. The student data should appear sorted alphabetically by last name. If you had a problem with sorting, close the workbook without saving and reopen it.

22. **Save**  the workbook and leave it **open**.

Sorting by Multiple Columns

Video Lesson

labyrinthlab.com/videos



The Sort dialog box is used to specify multiple sort keys for multiple-column sorts. For example, a worksheet displays last names in column A and first names in column B. Using the Sort dialog box, you may instruct Excel to sort the rows by last name and then by first name. This way, all rows with the same last name, such as Do, will be grouped together. Then those rows would be sorted by first name within each group (Do, Alan, followed by Do, Melissa, and then Do, Ty). You may sort by more than two columns when necessary. You display the Sort dialog box with the Data→Sort & Filter→Sort command.

DEVELOP YOUR SKILLS 7.1.2

Sort by Multiple Columns

In this exercise, you will use the Sort dialog box to perform a two-column sort and a three-column sort.

1. **Select** any cell in the data list.

2. Choose **Data→Sort & Filter→Sort**  from the Ribbon.

The Sort dialog box appears.

3. Follow these steps to sort the list by last name and then by first name:

A If necessary, choose **Last Name** from the Sort By list.

B Make certain **Values** is the Sort On setting.

C Make certain **A to Z** is the Order setting.

D Click the **Add Level** button to add a second sort category.

E Choose **First Name** for the second sort, and make certain that **Values** and **A to Z** are set for this sort.

F Make certain the **My Data Has Headers** option box is checked. (This option indicates that the list has a header row.)

G Click **OK** to perform the two-column sort.

Notice that the records with last name *Do* are sorted alphabetically by first name. Check that other records with the same last name are then sorted by first name.

Next you will add *Category* for a three-column sort.

4. Choose **Data**→**Sort & Filter**→**Sort**  from the Ribbon.
The specifications for the two-level sort still display in the Sort dialog box.

5. Follow these steps to add a sort category and move it up in the sort order:

A Click the **Add Level** button.

B Choose **Category** for the sort, and make certain that **Values** and **A to Z** are set for this sort.

C Click the **Move Up** button to move **Category** to the top level. (If **Category** is not at the top, click the button again.)

6. Click **OK**.

The records are first sorted by category and then by last name within each category. Any duplicate last names are sorted by first name.

7. **Save**  the changes, and leave the workbook **open**.


7.2 Using Flexible Worksheet Views

Video Lesson

labyrinthelab.com/videos

Excel allows you to view two areas of a large worksheet that normally could not display together. When done, you may restore the worksheet to its original view. The Freeze Panes and Split commands affect only how the worksheet displays. The worksheet prints as usual. When a workbook is opened, each worksheet displays the view that was in effect when the workbook was last saved. The New Window and Arrange All commands display two or more areas of a large worksheet in separate windows that may be scrolled simultaneously. Two or more worksheets in the same workbook or different workbooks can also be viewed at once. The multiple-window layout may be saved as a workspace for reuse later.

Freezing Rows or Columns

 When you scroll to the right on a wide worksheet, the headings in column A are no longer visible as you bring the next columns into view. As you scroll down, the row containing the column headings disappears. Without the headings, you cannot identify the person or category to which the data belong. Freezing the headings helps you keep your place as you scroll to the right or down the worksheet. When you give the Freeze Panes command, Excel freezes all rows above the selected cell and all columns to the left of the selected cell. You may freeze rows, columns, or both. The following illustration shows a cell selected before freezing headings in both rows and columns.



Use the Freeze Panes  command to lock the headings in all worksheets that have more rows or columns than can fit on one screen.

	A	B	C	D	E	F	G
1	Seaview College Usage Report						
2				Year 1			
3							
4	Last Name	First Name	Category	Jan	Feb	Mar	Apr
5	Do	Alan	Alumni	0.0	0.0	0.0	0.0
6	Johnson	Chriss	Alumni	0.0	0.0	3.5	0.0
7	Nguyen	Jimmy	Alumni	0.0	2.0	0.0	0.0

Selecting a cell before giving the Freeze Panes command tells Excel where you want the panes frozen.

Before freezing

	A	B	C	K	L	M	N
1	Seaview College Usage Report						
2							
3							
4	Last Name	First Name	Category	Aug	Sep	Oct	Nov
18	Harris	Patti	Staff	4.5	6.5	3.0	0.5
19	Johnson	Riley	Staff	25.5	10.0	8.5	16.0
20	Ly	Cindy	Staff	0.0	0.0	0.0	0.0

After freezing: As you scroll, rows above and columns to the left of the selected cell are frozen.

DEVELOP YOUR SKILLS 7.2.1

Freeze Rows and Columns

In this exercise, you will freeze both rows and columns, rows only, and columns only.

Freeze Rows and Columns

1. Scroll to the **right** until the totals column on the right side of the spreadsheet is visible.

Columns A and B, which contain the users' names, dropped off the window. Without those headings, you cannot identify the person belonging to the data.

	Y	Z	AA	AB
1				
2				
3				
4	Oct	Nov	Dec	Totals
5	2.5	0.0	3.0	79.0
6	11.5	13.0	7.0	84.5
7	0.0	2.0	3.0	24.5

2. Tap **Ctrl** + **Home** to move the highlight to cell A1.

This keystroke combination is useful when you work with large worksheets.

3. Select cell D5.

This cell is below the headings in rows 1–4 and to the right of the headings in columns A–C.

4. Choose **View**→**Window**→**Freeze Panes**  menu ▼, and then choose **Freeze Panes** from the Ribbon.

The area above and to the left of cell D5 is frozen, indicated by a horizontal and a vertical separation line.

5. Scroll to the **right** until the totals on the right side of the spreadsheet are in view.

The frozen columns A–C remain visible to identify the people belonging to the totals.

6. Tap **Ctrl** + **Home** on the keyboard to jump back to the home cell, and notice that the highlight moves to cell D5 instead of A1.

Cell D5 is now the home cell because you froze the window panes at that location.

7. Select cell B5.

Notice that you could edit this cell if desired. Frozen columns and rows still are available for editing.

8. **Scroll down** until the monthly totals are visible as shown below.

	A	B	C	D	E	F	G
1	Seaview College Usage Report						
2				Year 1			
3							
4	Last Name	First Name	Category	Jan	Feb	Mar	Apr
41	Tejani	Sabrina	Student	10.0	8.5	16.0	8.0
42	Zorn	Paul	Student	13.0	8.0	4.0	2.0
43							
44	Month Totals			303.5	366.5	396.0	292.0

The frozen rows 1–4 remain visible to identify the year and months belonging to the totals.

Let's say you ask, "What are the total usage hours for years 1 and 2?" The frozen panes will make it easier to locate this information.

9. Scroll to the **right** until the totals on the right side of the spreadsheet are visible.

	A	B	C	Y	Z	AA	AB
1	Seaview College Usage Report						
2							
3							
4	Last Name	First Name	Category	Oct	Nov	Dec	Totals
41	Tejani	Sabrina	Student	3.0	0.0	0.0	126.0
42	Zorn	Paul	Student	8.0	0.0	0.0	75.0
43							
44	Month Totals			483.5	591.5	440.0	7964.5

The usage total is 7964.5 hours. Freezing the headings helped you identify the totals cells.

10. Choose **File→Print**, and view the print preview at the right of Backstage view.
The frozen panes do not affect printing. The entire worksheet would print. You will learn to repeat row and column headings on each printed page of large worksheets later in this lesson.

11. Tap **[Esc]** to exit the view without printing.

12. Choose **View→Window→Freeze Panes**  menu ▼, and then choose **Unfreeze Panes** from the Ribbon.

Excel unfreezes the heading rows and columns and restores the worksheet to its original view.

Freeze Rows Only

Now you will select a cell that has no columns to the left of it. This tells Excel to freeze only rows.

13. Select **cell A5**, and then choose **View→Window→Freeze Panes**  menu ▼→Freeze Panes from the Ribbon.

Rows 1–4 are frozen, but no columns are frozen.

14. Scroll **down** and **right** to verify that only rows are frozen.

When all columns of a worksheet fit in the window, you may freeze rows only.

15. **Unfreeze** the panes.

Freeze Columns Only

16. Select **cell D1**, and then choose **View→Window→Freeze Panes**  menu ▼→Freeze Panes from the Ribbon.

Columns A–C are frozen, but no rows are frozen.

17. Scroll **down** and **right** to verify that only columns are frozen.

When all rows of a worksheet fit in the window, you may freeze columns only.

18. **Unfreeze** the panes.


19. Tap **[Ctrl] + [Home]** to return the pointer to **cell A1**; leave the workbook **open**.

You do not need to save because you made no changes in this exercise.

Splitting the Worksheet Window

Video Lesson


labyrinthlab.com/videos

 At times, you will want to split the window to scroll within two areas of a worksheet. For example, a manager may want to compare data in rows 3–15 with rows 203–215. Use the Split command for this purpose. As with the Freeze Panes command, you should select the appropriate cell before choosing Split. To divide the window into two panes, select the first cell in a row or column. You may display four panes by selecting any other cell, but displaying two panes usually is sufficient. Using the same Split command, which now displays a highlight, removes the split. This type of command is called a *toggle*. Click it once to switch the command on and again to switch it off.

Splitting Compared to Freezing

Freezing is useful to keep headings always visible. However, you may not easily view two nonadjacent groups of data. Splitting the window allows you to view two or four nonadjacent groups. Each pane has its own set of scroll bars. You may drag the split bar to adjust the number of rows or columns displayed in each pane. The following illustrations contrast a split window with a frozen window.

A split window

Split bar 

	A	B
9	Kim	Tae Joon
10	Kissinger	Dorothy
15	Tejani	Tabriz
16	Do	Ty
17	Garcia Moreno	Juan

Each pane may be scrolled to view nonadjacent areas of the worksheet.

A frozen window

	A	B	C	K	L
1	Seaview College Usage Report				
2					
3					
4	Last Name	First Name	Category	Aug	Sep
18	Harris	Patti	Staff	4.5	6.5
19	Johnson	Riley	Staff	25.5	10.0

Headings remain visible, but the ability to view nonadjacent areas is limited.



TIP

Use only Split or Freeze, not both together. One does not operate correctly when the other is in effect.


QUICK REFERENCE

CONTROLLING WORKSHEET VIEWS


Task

Procedure


Freeze columns and rows

- Select the cell below and to the right of the area to be frozen.
- Choose View→Window→Freeze Panes  menu ▼→Freeze Panes from the Ribbon.


Freeze columns

- Select the first cell in the column to the right of the column(s) to be frozen.
- Choose View→Window→Freeze Panes  menu ▼→Freeze Panes from the Ribbon.

Freeze rows


- Select the first cell in the row below the row(s) to be frozen.
- Choose View→Window→Freeze Panes  menu ▼→Freeze Panes from the Ribbon.

Unfreeze all

- Choose View→Window→Freeze Panes  menu ▼→Unfreeze Panes from the Ribbon.

QUICK REFERENCE**CONTROLLING WORKSHEET VIEWS (continued)****Task****Procedure**


Split a window between columns or rows

- Select the first cell in the column or row in which the split is to occur.
- Choose View→Window→Split  from the Ribbon.

Adjust a split

- Drag the split bar that divides the window panes.

Remove a split

- Choose View→Window→Split  from the Ribbon.

Enlarge or shrink the worksheet view

- Drag the Zoom slider at the bottom-right corner of the worksheet window.

DEVELOP YOUR SKILLS 7.2.2**Split the Worksheet Window**


In this exercise, you will split a worksheet window into two panes to scroll and compare data in two areas. You also will split the window into four panes so that column headings display to identify the total row data.

Before You Begin: The Seaview College Usage Report workbook should be open and the Years 1–2 sheet active. The list should appear sorted by category and then last name within the category. Records with the same last name are then sorted by first name. No rows or columns should be frozen.

Split between Columns

- Follow these steps to split the window between columns:

- Select cell H1.

- Choose View→Window→Split  from the Ribbon.

	A	B	C	D	E	F	G	H	I	J
1	Seaview College Usage Report									
2				Year 1						
3										
4	Last Name	First Name	Category	Jan	Feb	Mar	Apr	May	Jun	Jul
5	Do	Alan	Alumni	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Johnson	Chriss	Alumni	0.0	0.0	3.5	0.0	0.0	0.0	2.0

The window displays two panes with a gray split bar between them.

- In the pane on the right, drag the **scroll box** in the horizontal scroll bar to the right until **column K** is the first column visible, as shown in the following illustration.

G	K	L	M	N
Apr	Aug	Sep	Oct	Nov
0.0	0.0	6.0	14.5	18.0
0.0	3.0	0.0	2.0	0.0
0.0	2.5	0.0	3.0	0.0

The pane displays the year 2 data.

Compare the Alumni usage pattern for January through April with August through November of year 1. All alumni increased their hours, especially Alan Do.

3. In the left pane, scroll **right** until **column K** is the first column visible.

Notice that the headings in columns A–C are no longer visible. They cannot be frozen while the window is split. You are comparing usage patterns for the entire list, so viewing the names is not necessary.

	K	L	M
1			
2			
3			
4	Aug	Sep	Oct
5	0.0	6.0	14.5

4. Follow these steps to move the split bar:

O	P	Q	R	K	L
	Year 2				
Dec	Jan	Feb	Mar	Aug	Sep
17.5	9.5	4.5	0.0	0.0	6.0
0.0	4.5	9.0	8.5	3.0	0.0

- **A** Point to the **split bar** until the mouse pointer changes to a **two-headed arrow**.

B Drag to the left until the split bar is to the right of column O.

5. Follow these steps to display Aug-Dec for year 2 in the pane at the right:

	K	L	M	N	O	W	X	Y	Z	AA	AB
1											
2											
3											
4	Aug	Sep	Oct	Nov	Dec	Aug	Sep	Oct	Nov	Dec	Totals
5	0.0	6.0	14.5	18.0	17.5	0.0	0.0	2.5	0.0	3.0	79.0

24	1.5	17.0	24.5	16.0	13.5	0.0	25.5	32.0	18.5	27.0	381.0
25	2.0	14.0	3.5	9.0	3.0	14.0	36.5	33.0	40.0	12.0	266.0

A Scroll the pane on the **right** until **column W** is the first column visible.


B If you cannot drag the scroll box farther to the right, click the **right scroll arrow** to continue scrolling.

The left pane should display Aug–Dec of year 1, and the right pane should display Aug–Dec of year 2 and the totals column.

6. Scroll **down** until the month totals in **row 44** are in view.

42	3.0	0.0	0.0	0.0	0.0	0.0	3.5	8.0	0.0	0.0	75.0
43											
44	215.5	282.0	379.5	378.0	310.5	202.5	428.5	483.5	591.5	440.0	7964.5

Compare the month totals in the range K44:O44 with the same months in the range W44:AA44 to see that usage increased for each month in year 2. This comparison is more difficult because you cannot see the month names in row 4.

7. Choose **View**→**Window**→**Split**  from the Ribbon to remove the split and restore the worksheet to its original view.

Unlike Freeze Panes, the Split command toggles on and off when you click the same button.

Split between Rows and Columns

8. Scroll **up**, select **cell P5**, and choose **View→Window→Split** from the Ribbon.





This time, the window split into four panes because the pointer was not in the first cell of a row or column. The row 4 labels are in the upper panes because you selected a cell in row 5.

9. Scroll the **lower-right** pane until **column W** is the first column visible, and then scroll **down** to view the month totals in **row 44**.

N	O	P	Q
		Year 2	
Nov	Dec	Jan	Feb
18.0	17.5	9.5	4.5
0.0	0.0	4.5	9.0

[illegible]

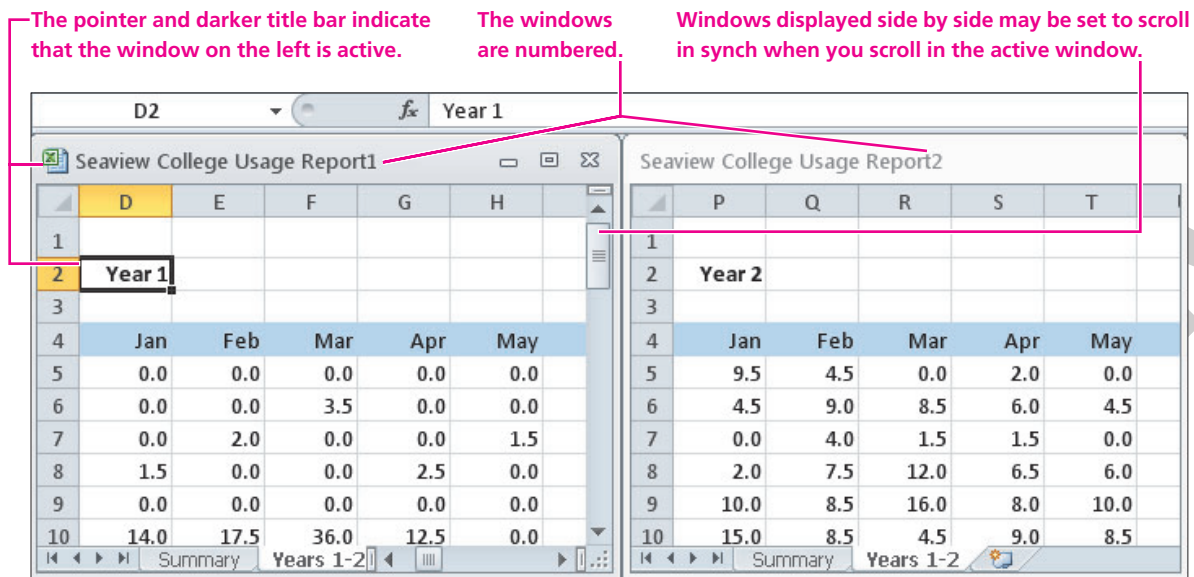
With the month names visible, comparing each month's hours between year 1 and year 2 is easier.

10. Choose **View**→**Window**→**Split**  from the Ribbon to remove the split.
11. Tap  +  to return the pointer to **cell A1**.
12. **Save**  the change you made in the previous step, and leave the workbook **open**.

Viewing Worksheets in Multiple Windows

Video Lesson labyrinthelab.com/videos

As an alternative to splitting the worksheet window, you may display two areas of a large worksheet at once in separate windows within Excel. You can even display two or more worksheets in this way. The worksheets may be from the same workbook or different workbooks. This method allows you to compare, copy, or move data between worksheet areas more easily. Each window is numbered, and only one window can be active at one time. The New Window command on the Ribbon is used to add worksheet windows, and the Arrange All command displays them side by side, stacked top to bottom, or cascaded in layers with their title bars visible for selection.



Two areas of the same workbook displayed as tiles in order to compare data between two years










The commands of the Window group in the View Ribbon

Synchronous Scrolling

Once windows are arranged, they may be scrolled independently with the scroll bars in each window. You may want to use synchronous scrolling so that the view in all windows moves simultaneously in the same direction as you scroll in the active window. This feature keeps the rows or columns aligned in the windows to help you compare data. To use synchronous scrolling, the windows must be set to be viewed side by side.

Saving the Layout as a Workspace

The Save Workspace command saves your multiple-window layout as a file separate from the workbook containing the data. The workbook still must be saved if you change any data and then close it. When you reopen the workspace file from your file storage location, any worksheets contained in the saved workspace will open in their respective windows ready for you to resume work.

QUICK REFERENCE	ARRANGING MULTIPLE WORKSHEET WINDOWS
Task	Procedure
View two areas of the same worksheet	<ul style="list-style-type: none"> Choose View→Window→New Window  from the Ribbon. Choose View→Window→Switch Windows menu ▼  from the Ribbon, and select the desired active window from the list. Choose View→Window→View Side by Side  from the Ribbon. The active window will appear on top or at the left.
View two worksheets from the same workbook	<ul style="list-style-type: none"> Display the first worksheet. Choose View→Window→New Window  from the Ribbon. Click the tab of the second worksheet in the new window. Arrange the windows as desired.
View two worksheets from different workbooks	<ul style="list-style-type: none"> Display the first worksheet. Choose File→Open, and navigate to the desired workbook. Arrange the windows as desired.
Scroll windows synchronously	<ul style="list-style-type: none"> Use one of the previous procedures to set up two or more windows. Choose View→Window→View Side by Side  from the Ribbon. If Synchronous Scrolling does not turn on automatically, choose View→Window→Synchronous Scrolling from the Ribbon.
Arrange windows	<ul style="list-style-type: none"> Choose View→Window→Arrange All , and select a display option from the list.
Save a multiple-window layout	<ul style="list-style-type: none"> Choose View→Window→Save Workspace  from the Ribbon, type a filename, and navigate to the desired file storage location.

DEVELOP YOUR SKILLS 7.2.3

Arrange Multiple Worksheet Windows

In this exercise, you will view nonadjacent areas of a worksheet in separate windows and scroll them synchronously. You will arrange two worksheets from a workbook to view them simultaneously and then save the view as a workspace.

View Areas of the Same Worksheet

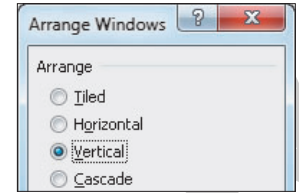
1. Display the **Years 1–2** worksheet in the Seaview College Usage Report workbook, if necessary.
2. Choose **View→Window→New Window**  from the Ribbon.
The Excel title bar displays Seaview College Usage Report:2 to indicate the window you just created.
3. Choose **View→Window→Switch Windows**  menu ▼ from the Ribbon, and select **Seaview College Usage Report:1** from the list.
The Seaview College Usage Report:1 window now is the active window.

4. Choose **View→Window→View Side by Side**  from the Ribbon.

The Seaview College Usage Report:1 window appears on top of the other window because it was active when you chose the side-by-side view. (Depending on your computer monitor size and screen resolution, the windows may be displayed left to right.)


5. Choose **View→Window→Arrange All**  from the Ribbon, choose **Vertical**, and click **OK**.

The windows are arranged left to right rather than top to bottom.

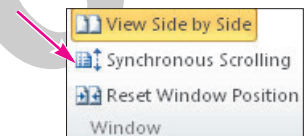


Use Independent and Synchronous Scrolling

Synchronous scrolling is turned on when you arrange windows side by side. Both windows display the year 1 data; so first you will scroll one window independently to display the year 2 data.

6. Choose **View→Window→Synchronous Scrolling**  in the Ribbon to toggle off synchronous scrolling.

The Synchronous Scrolling toggle button now should not appear highlighted.



7. Select **cell D5** in the Seaview College Usage Report:1 window, and choose **View→Window→Freeze Panes→Freeze Panes** from the Ribbon.

8. Click in the **Seaview College Usage Report:2** window, select **cell D5**, and freeze the panes.

9. Scroll the Seaview College Usage Report:2 window to the **right** until **column P** appears, as shown in the illustration below.

Seaview College Usage Report1						Seaview College Usage Report2					
	A	B	C	D	E		A	B	C	P	Q
1	Seaview College Usage Report					1	Seaview College Usage Report				
2				Year 1		2				Year 2	
3						3					
4	Last Name	First Name	Category	Jan	Feb	4	Last Name	First Name	Category	Jan	Feb
5	Do	Alan	Alumni	0.0	0.0	5	Do	Alan	Alumni	9.5	4.5
6	Johnson	Chriss	Alumni	0.0	0.0	6	Johnson	Chriss	Alumni	4.5	9.0
7						7	Nguyen	Jimmy	Alumni	0.0	4.0

The Jan, Feb, and other month columns display for year 1 and year 2. You scrolled a window independently from the other.

10. Choose **View→Window→Synchronous Scrolling**  in the Ribbon to toggle on synchronous scrolling.

11. Click in the **Seaview College Usage Report:1** window, scroll to the **right**, and watch the Seaview College Usage Report:2 window scroll as well.


The columns for the same months remain in view in both windows for easy comparison of the data between the two years.

12. Scroll **down** in one of the windows, and notice that synchronized scrolling displays the same rows in each window.




13. Click in the **Seaview College Usage Report:2** window, and close it.



View Worksheets in the Same Workbook

14. Choose **View**→**Window**→**New Window**  from the Ribbon.
15. Click the **Summary** sheet tab in the Seaview College Usage Report:2 window.
16. Choose **View**→**Window**→**Arrange All**, choose **Tiled**, and click **OK**.
The Summary sheet and Years 1–2 sheet display side by side. Synchronous Scrolling is off, so you could scroll the Years 1–2 window and refer to the summary totals in the other window.

Save the Layout as a Workspace

17. Choose **View**→**Window**→**Save Workspace**  from the Ribbon, and save as **Seaview College Workspace** in the Lesson 07 folder in your file storage location.
The current window layout will be displayed the next time you open the workspace file.
18. Close  the Summary sheet window, and maximize the Years 1–2 sheet window. 
19. **Unfreeze** the panes.
20. Leave the workbook **open**.
You do not need to save because you did not make any changes to the workbook.

Creating Custom Worksheet Views

You can save certain display settings and print settings as custom views to redisplay at a later time. The display settings may include the currently selected cell or range, column widths, row heights, hidden rows and columns, filters, and window size. Print settings may include margins, headers and footers, print area, and sheet settings in the Page Setup dialog box. You can create multiple custom views in a worksheet. A view, however, can be applied only to the worksheet for which you created the custom view.



To manage custom views, include the worksheet name when creating a custom view name.

QUICK REFERENCE	CREATING AND DISPLAYING CUSTOM WORKSHEET VIEWS
Task	Procedure
Create a custom view	<ul style="list-style-type: none"> ■ Change the worksheet display and print settings as desired. ■ Choose View→Workbook Views→Custom Views from the Ribbon. ■ In the Custom Views dialog box, click Add. ■ Enter a view name, and select the desired options.
Display a custom view	<ul style="list-style-type: none"> ■ Choose View→Workbook Views→Custom Views from the Ribbon. ■ Double-click the desired view in the Custom Views dialog box.

7.3 Printing Multipage Worksheets

Video Lesson

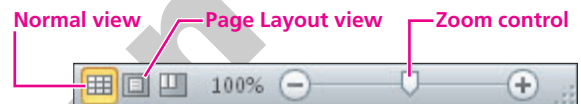
labyrinthelab.com/videos

Excel provides a number of options for improving the format of large printed worksheets. For example, you may adjust settings such as:

- Decreasing the page margins or page scale to include more rows and columns
- Centering the worksheet on the page
- Printing pages horizontally (landscape) or vertically (portrait)
- Printing only a selected range of worksheet cells
- Adding a header and footer to label pages

Setting Print Format in Page Layout View

Previously in this lesson, you edited a worksheet in Normal view and used the print preview in Backstage view to see how the worksheet would look as printed. The print preview allows you to view one page at a time. As an alternative, display Page Layout view, which can preview multiple printed pages. As you choose a printing option from the Ribbon, you can view the result immediately. You also may edit the worksheet in Page Layout view. You may change the view by using the View Ribbon or the view buttons in the Status Bar at the lower-right corner of the window.




The view buttons displayed in the lower-right corner of the worksheet window

DEVELOP YOUR SKILLS 7.3.1

Display Page Layout View

In this exercise, you will preview the worksheet in Page Layout view.

1. Tap **Ctrl** + **Home** to move the pointer to cell A1, if necessary.
2. Choose **View**→**Workbook Views**→**Page Layout**  from the Ribbon.
The worksheet displays as it would print on paper. The Status Bar at the lower left of the window displays Page: 1 of 3 to show that the cell pointer is in page 1 of three pages total.
3. Drag the **scroll box** in the **horizontal scroll bar** to the right to view pages 2 and 3.
4. Drag the **scroll box** in the **vertical scroll bar** down to view the bottom of the pages.
5. Drag the **slider** in the **Zoom** control in the lower-right corner of the window to about **25%**.


The worksheet shrinks dramatically. Dimmed pages will not print, as those columns and rows are empty in the worksheet. The zoom level affects only how you are viewing the worksheet, not its printed appearance.



6. Drag the Zoom slider to about **40%**.

Year 1		Year 2					Year 3	
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

The three pages should almost fill the view. If necessary, use a different zoom percentage to adjust for your computer monitor.

7. Choose **View→Worksheet Views→Normal**  from the Ribbon to return to Normal view.

8. Click the **Page Layout view** button in the Status Bar at the lower-right corner of the window.



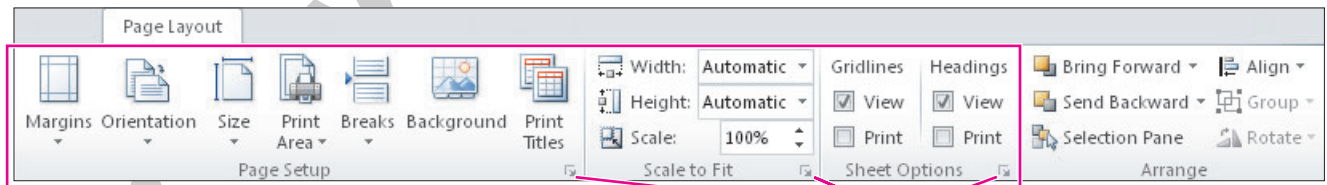
The view returns to the zoom percentage that you set previously. Notice how the columns fall on the pages. Page breaks split up the yearly data, and pages 2 and 3 are without headings to identify the person belonging to each row. You will resolve these problems in the next exercises.

9. **Save**  the changes, and leave the workbook **open**.

Page Layout Ribbon

Video Lesson labyrinthlab.com/videos

The print options are accessed on the Page Layout Ribbon in the Page Setup, Scale to Fit, and Sheet Options command groups. You may change the page orientation, adjust margins, and scale the worksheet size. As an alternative, the Page Setup dialog box available in prior Excel versions is launched by clicking the launcher button in the lower-right corner of the command group. You will use the Page Setup dialog box occasionally for commands not located on the Ribbon.

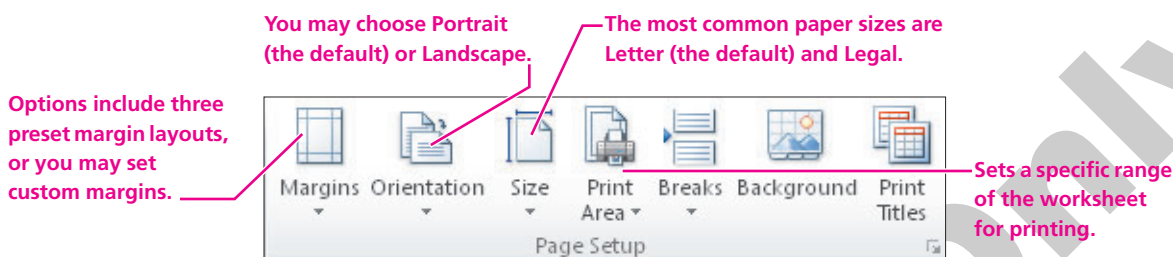


The Page Layout Ribbon with printing options in the Page Setup, Scale to Fit, and Sheet Options command groups.

Excel users who prefer changing settings in the Page Setup dialog box may click here.

Sizing Options

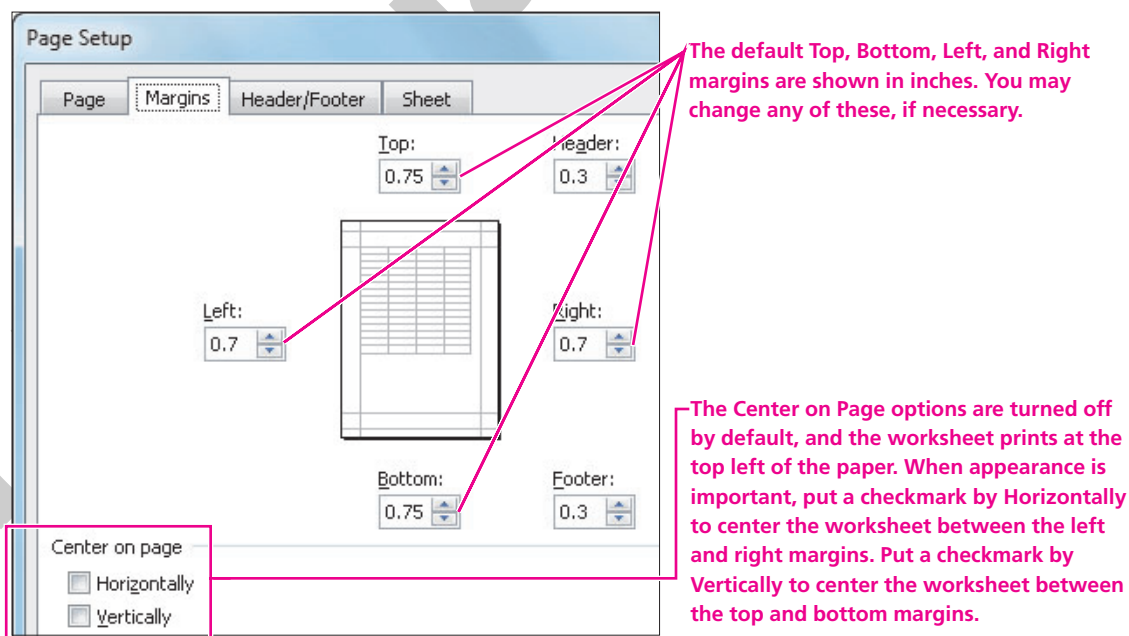
The Page Setup and Scale to Fit command groups on the Page Layout Ribbon contain several options to help fit large worksheets on printed pages. Four useful sizing options are shown in the following illustration.



You can use the orientation, margin presets, paper size, and scaling presets available in the Print tab of Backstage view to correct the worksheet size just before printing.

Margins

The margins determine the space between the edge of the paper and the worksheet. You may choose from three preset margin layouts—Normal, Wide, and Narrow—as well as a Custom Margins option. Choose Narrow to fit more columns and rows on the printed page. Choose Custom Margins to launch the Page Setup dialog box with the Margins tab displayed. On this tab you may set specific worksheet margins and center the worksheet horizontally and vertically on the paper. Header and footer margins are covered later in this lesson. The illustration below describes the dialog box options.



Orientation



The orientation indicates the direction of printing. Portrait is the default and prints across the narrow edge of the paper. Landscape orientation prints across the wide edge of the paper and is useful with wide worksheets like the Years 1–2 worksheet in the Seaview College Usage Report workbook. The orientation of each worksheet may be set individually in a workbook.



**Portrait
orientation**



**Landscape
orientation**

Size



The Size option refers to the paper size. The default is Letter 8.5" × 11" paper. You can fit more columns on the page using Legal 8.5" × 14" paper, but keep in mind that the larger size paper may be more difficult to store.

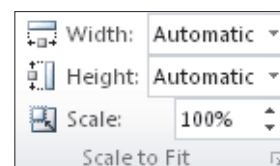
Print Area



To reduce the number of printed pages or to leave out nonessential cells, you may set any range of cells in the worksheet as the print area. The Set Print Area command makes the range permanent until you set a different range or choose Clear Print Area to restore the entire worksheet for printing. Use Set Print Area if you plan to print a specific range most of the time.

Scale to Fit









The Scale to Fit command group on the Page Layout Ribbon provides automated scaling options to shrink the worksheet for printing.



- **Width**—You may reduce the size of a worksheet containing many columns to fit its width on one, two, or more pages, as appropriate. When a few worksheet columns spill onto the next printed page, set the Width to one page less.
- **Height**—You may set the Height for one page less when a few rows spill onto another page. Reduce the size of a worksheet containing many rows to fit its height on one, two, or more pages, as appropriate.
- **Scale**—To shrink the width and height in the same proportion, set the Scale to less than 100%. Note that, for legibility, you may scale a small worksheet to greater than 100%. To use Scale, the Width and Height must be set to Automatic. Keep in mind that a scaled worksheet may fit on fewer pages, but the text may be too small to read.



To reset the Height and Width to normal size, choose Automatic from each drop-down list. Make certain to change Scale to 100%, as the percentage does not reset automatically. The Undo command cannot reverse any Scale to Fit settings.

QUICK REFERENCE	SETTING PRINT OPTIONS
Task	Procedure
Display Page Layout view	<ul style="list-style-type: none"> Choose View→Workbook Views→Page Layout  from the Ribbon or click the Page Layout view button in the lower-right corner of the window.
Change to preset margins	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→Margins  menu ▼ and choose Normal, Narrow, or Wide from the Ribbon.
Change specific margins	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→Margins  menu ▼ and choose Custom Margins from the Ribbon. Change the Top, Bottom, Left, or Right margin in the Page Setup dialog box.
Center the worksheet on printed page(s)	<ul style="list-style-type: none"> Click the dialog box launcher  button in the bottom-right corner of the Page Setup command group of the Page Layout Ribbon. Choose the Margins tab in the Page Layout dialog box. Under Center on Page, place a checkmark next to Horizontally to center between the left and right margins. Under Center on Page, place a checkmark next to Vertically to center between the top and bottom margins.
Change the orientation	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→Orientation  menu ▼ and choose Portrait or Landscape from the Ribbon.
Change paper size	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→Size  menu ▼ and choose a paper size from the Ribbon.
Scale the worksheet to fit on fewer pages	<ul style="list-style-type: none"> Choose Page Layout→Scale to Fit, select 100% in the Scale box, type the desired percentage, and tap Enter.
Scale the worksheet width or height	<ul style="list-style-type: none"> Choose Page Layout→Scale to Fit→Width menu ▼ or Height menu ▼ and set the desired number of pages.
Set a print range	<ul style="list-style-type: none"> Select the desired cells. Choose Page Layout→Page Setup→Print Area  menu ▼→Set Print Area from the Ribbon.
Remove the print range	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→Print Area  menu ▼→Clear Print Area from the Ribbon. The entire worksheet area containing data is restored as the print area.

DEVELOP YOUR SKILLS 7.3.2

Use Sizing Options

In this exercise, you will change the orientation and margins. You also will scale a worksheet to print on fewer pages. You will use commands on the Ribbon as well as in the Page Setup dialog box.

Switch to Landscape Orientation

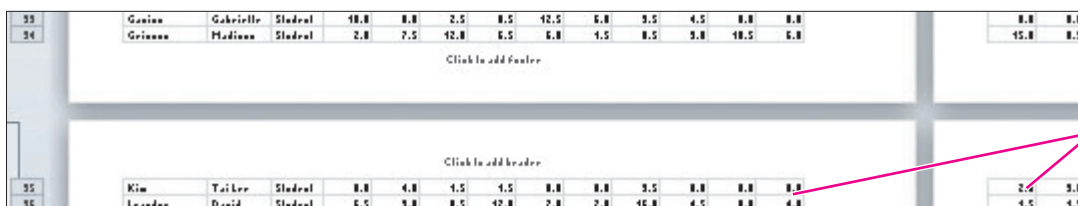
- Verify that the Seaview College Usage Report workbook is open from the previous exercise. The **Years 1–2** worksheet should be displayed in **Page Layout view** at about **40%** zoom. Notice that the pages appear in portrait orientation with the narrow edge of the paper on top.



If the worksheet does not display the page edges, the current view might be set to Normal. Switch to Page Layout view. You may choose printing options in Normal view, but you cannot see the results.

2. Choose **Page Layout**→**Page Setup**→**Orientation**  menu ▼→**Landscape** from the Ribbon.

By printing along the wide edge of the page, you have reduced the worksheet width to two pages. A few rows, however, still spill down onto additional pages.



33	Guinea	Gabrielle	Slodral	18.8	8.8	2.5	8.5	12.5	6.8	9.5	4.5	8.8	8.8	8.8	8.8
34	Guinea	Madison	Slodral	2.8	7.5	12.8	6.5	6.8	1.5	8.5	9.8	18.5	6.8	15.8	8.5
35	Kim	Tailor	Slodral	8.8	4.8	1.5	1.5	8.8	8.8	9.5	8.8	8.8	8.8	2.4	9.8
36	Krader	David	Slodral	6.5	9.8	8.5	12.8	7.8	2.8	16.8	4.5	8.8	4.8	1.5	1.5

Some rows do not fit and would print as pages 3 and 4.

3. **Save**  the change to the workbook.

Change Margins

4. Choose **Page Layout**→**Page Setup**→**Margins**  menu ▼→**Narrow** from the Ribbon.

5. Experiment with the choices in the **Margins**  menu ▼ by choosing **Wide**, then **Normal**, and then returning to **Narrow**.

Decreasing the margins allows more columns and rows to fit on a page, but the rows still do not fit onto one page in height.

6. **Save**  the changes to the workbook.

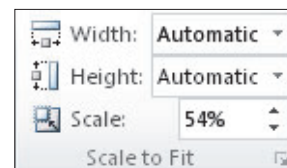
Use the Scale to Fit Options

7. Examine the **Years 1–2** worksheet.

Recall that this worksheet still does not fit on one page in height. Notice that the worksheet is significantly wider than it is tall.

8. Choose **100%** in the Scale box in the Scale to Fit command group of the Page Layout Ribbon, type **54**, and tap **[Enter]**.

Both the width and height were scaled to almost half size to fit on one page. As you can see, it wasn't such a good idea to compress a two-page worksheet onto one page. The printed worksheet would be unreadable. The Scale option works best when only a few columns or rows spill over to an extra page.

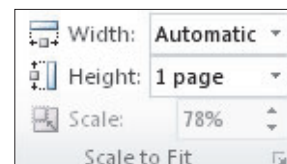


9. Choose **54%** in the Scale box in the Scale to Fit command group of the Page Layout Ribbon, type **100**, and tap **[Enter]**.

You must reset the Scale to Fit options manually because Undo cannot reverse them. Next, you will instruct Excel to shrink the rows to fit on one page in height without affecting the width.

10. Choose **Page Layout**→**Scale to Fit**→**Height** menu ▼→**1 page** from the Ribbon.

Your worksheet now fits on 1 page high and 1.5 pages wide. The width changed in proportion to the height that you chose. The Status Bar should display Page: 1 of 2. If you change the Width or Height, the Scale option becomes unavailable, and the opposite also is true.



11. **Save**  the changes to the workbook.

Set the Print Area

Assume that you want to print only part of the worksheet.

12. Click the **Normal** view button in the lower-right corner of the window.



13. Select cells **A1:H13**.

14. Choose **Page Layout**→**Page Setup**→**Print Area**  menu ▼→**Set Print Area** from the Ribbon.

The print area appears surrounded by a fence border.

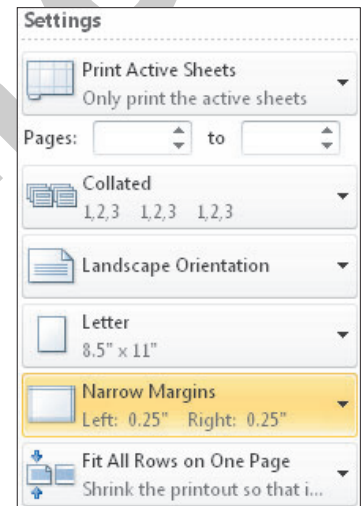
Preview the Printout

15. Choose **File**→**Print**.

Excel would print only the cells that you set as the print area.

16. Look at the **Settings** area in the lower-left corner of Backstage view.

Notice that settings you chose, such as Landscape Orientation and Narrow Margins, are shown. You could change a setting from its drop-down list in Backstage view and observe the effect in the print preview. This feature is useful when you discover a sizing error just before printing.



17. Click the **Page Layout** tab on the Ribbon to close Backstage view.

18. Choose **Page Layout**→**Page Setup**→**Print Area**  menu ▼→**Clear Print Area** from the Ribbon.

The fence border disappears because the print area is reset to include all cells containing data in the entire worksheet.

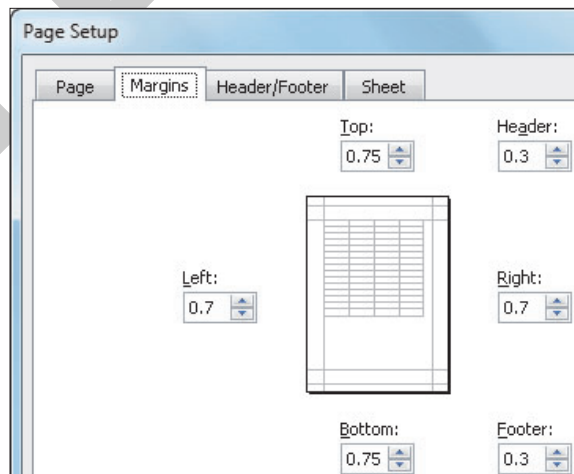
19. Select any cell to deselect the highlighted cells.

Center the Summary Worksheet

You will center the Summary worksheet on the printed page in the next steps.

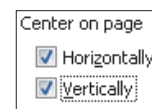
20. Display the **Summary** sheet of the workbook in Page Layout view.

21. Choose **Page Layout**→**Page Setup**→**Margins**  menu ▼→**Custom Margins** from the Ribbon.





The Page Setup dialog box opens with the Margins tab displayed. The default margin settings in inches for Top, Bottom, Left, and Right may be different in your dialog box, depending on the printer that you use. The margins may be adjusted individually.

22. In the Center on Page area at the lower-left corner, place a checkmark next to **Horizontally** and **Vertically**; then click **Print Preview** at the lower-right corner of the dialog box.



The print preview in Backstage view shows that the worksheet is centered between the left and right margins and between the top and bottom margins on the page. You could choose to center only horizontally, which aligns the worksheet at the top margin.

23. Click the **Page Layout** tab on the Ribbon to exit Backstage view.
Notice that Page Layout view does not display horizontal and vertical centering. Only the print preview in Backstage view does.
24. Display the **Years 1–2** worksheet.
25. **Save**  the changes to the workbook.
26. **Print**  the Years 1–2 worksheet.

Examine your printed worksheet for the settings you performed. Now you have learned a sequence of techniques you may use to size a large worksheet for printing.

Headers and Footers

Video Lesson

labyrinthlab.com/videos

Headers print at the top of every page, and footers print at the bottom of every page. They identify the worksheet name, page number, and so on. Excel provides a variety of predesigned headers and footers from which you may choose. You may even create customized headers and footers to suit your particular needs and create a different header and footer on odd and even pages for double-sided printing. The following illustration contains a header.

Years 1-2, Seaview College Usage Report

Page 1 of 3

Author: Roxana Ortega

Seaview College Usage Report								
			Year 1					
Last Name	First Name	Category	Jan	Feb	Mar	Apr	May	Jun
Do	Alan	Alumni	0.0	0.0	0.0	0.0	0.0	0.0
Johnson	Chriss	Alumni	0.0	0.0	3.5	0.0	0.0	0.0

The three sections of this header print on every page and include the worksheet tab name, workbook name, page number, and text.

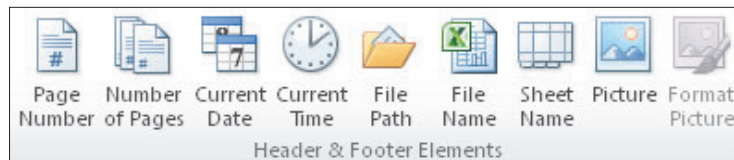
Use Page Layout view or the print preview in Backstage view to see headers and footers. They do not display in Normal view.



Creating and Formatting Headers and Footers

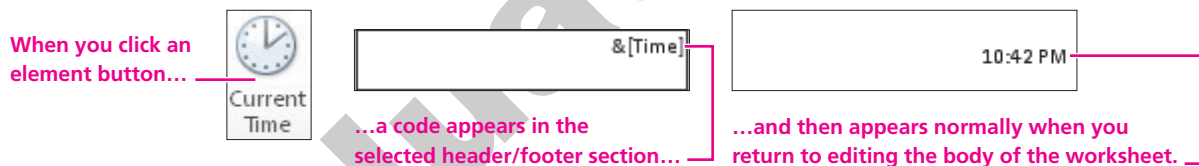
Headers and footers are created most conveniently in Page Layout view. Excel divides headers and footers into left, center, and right sections of the page. You need not fill in all three sections. To activate a section, just click in it to display the Design Ribbon filled with header and footer options. Once you activate a section, there are three ways to add content to it:

- Choose a predesigned item from the Header or Footer drop-down lists in the Header & Footer command group.
- Insert an element from the Ribbon.






The Header & Footer Elements command group in the Header & Footer Tools Design tab on the Ribbon


Options include the workbook filename, worksheet tab name, current date, time, and page number. When you choose an option from the Header & Footer Elements command group, Excel displays a code to represent the item. For example, the code `&[Date]` rather than the actual date displays because the current date will change. When you click outside the header section, Excel converts `&[Date]` to the actual date.



- Type your own custom text.

Excel allows you to use a combination of these methods to create header/footer content. You may also format headers and footers. For example, you may change the font, size, and color.

QUICK REFERENCE	CREATING HEADERS AND FOOTERS
Task	Procedure
Display Page Layout view	<ul style="list-style-type: none"> ■ Choose View→Workbook Views→Page Layout  from the Ribbon or click the Page Layout view button from the Status Bar at the lower-right corner of the window.
Select a predesigned page header or footer	<ul style="list-style-type: none"> ■ Display Page Layout view  from the Status Bar. ■ Select Click to Add Header above the worksheet or Click to Add Footer below the worksheet. ■ Choose Design→Header & Footer→Header menu ▼ or Footer menu ▼, and then choose a predesigned item in the Ribbon.
Create a custom page header or footer	<ul style="list-style-type: none"> ■ Display Page Layout view  from the Status Bar. ■ Select the left, center, or right header section above the worksheet or footer section below the worksheet. ■ Type text and set options from the Header & Footer Elements command group on the Ribbon.

QUICK REFERENCE	CREATING HEADERS AND FOOTERS (continued)
Task	Procedure
Set header and footer margins	<ul style="list-style-type: none"> Click the dialog box launcher  button in the bottom-right corner of the Page Setup command group of the Page Layout Ribbon. Choose the Margins tab in the Page Setup dialog box. Change the Header or Footer margin.
Create a different header and/or footer to print on page 1	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→dialog box launcher from the Ribbon. Click the Header/Footer tab in the Page Setup dialog box. Place a checkmark next to Different First Page, and click OK. Display the worksheet in Page Layout view, and create the desired headers and/or footers on page 1 and page 2. Any of these may be left blank, if desired.
Create different headers and/or footers to print on odd and even pages	<ul style="list-style-type: none"> Choose Page Layout→Page Setup→dialog box launcher from the Ribbon. Click the Header/Footer tab in the Page Setup dialog box. Place a checkmark next to Different Odd and Even Pages, and click OK. Display the worksheet in Page Layout view, create the desired header and/or footer on an odd page, and then create the desired header and/or footer on an even page.
Remove a header or footer	<ul style="list-style-type: none"> Select any section of the header or footer, choose Design→Header & Footer→Header menu ▼ or Footer menu ▼, and choose (None) from the Ribbon.

DEVELOP YOUR SKILLS 7.3.3

Set the Header and Footer


In this exercise, you will select predefined headers and footers, remove a footer, create custom headers and footers, and change the margins for these items.

Use Predefined Headers and Footers

1. Verify that the **Years 1–2** worksheet of the Seaview College Usage Report workbook is open from the previous exercise.
2. Choose **Page Layout view** from the Status Bar at the lower-right corner of the window.
3. Change the zoom level to about **75%**.
4. **Scroll up**, if necessary, to view the top of the page and choose **Click to Add Header**.



The center header section is activated, and the Design Ribbon displays. (If it does not, click the Design tab on the Ribbon.)

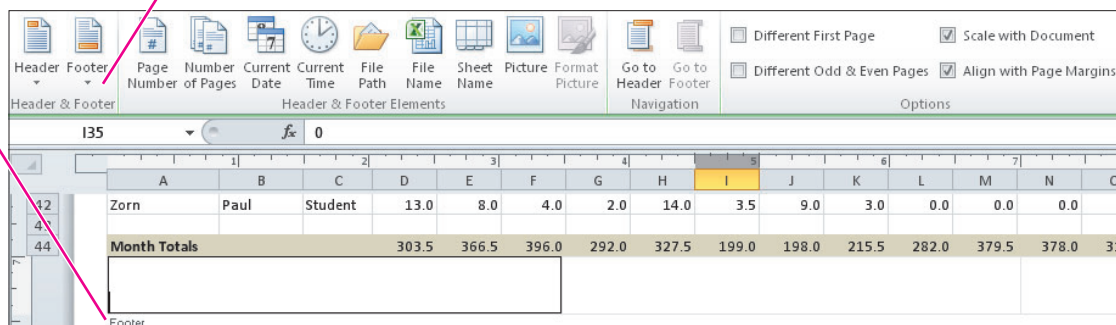
5. Choose **Design→Header & Footer→Header**  **menu ▼** on the Ribbon, browse the available predefined header choices, and then choose **Page 1 of ?** from the list. *The predefined header consists of one center section and displays as Page 1 of 2. The page number is updated on every page. For example, the header displays Page 2 of 2 on the second page.*

6. Follow these steps to select a predefined footer:

A Scroll to the bottom of the page.

B Select any footer section (left, center, or right).

C Choose **Design**→**Header & Footer**→**Footer** menu ▼ and choose any predefined footer from the Ribbon.



You may select any of the three sections before choosing a predefined header or footer.

Remove a Footer

7. Select any section of the footer.

8. Choose **Design**→**Header & Footer**→**Footer** menu ▼, and select **(None)** at the beginning of the menu in the Ribbon.

The previous footer was removed because you chose (None). The footer area displays Click to Add Footer.

Create a Custom Header and Footer

9. **Scroll up** in the worksheet to display the header.

Next, you will insert items in the header by clicking buttons on the Header & Footer Elements command group.




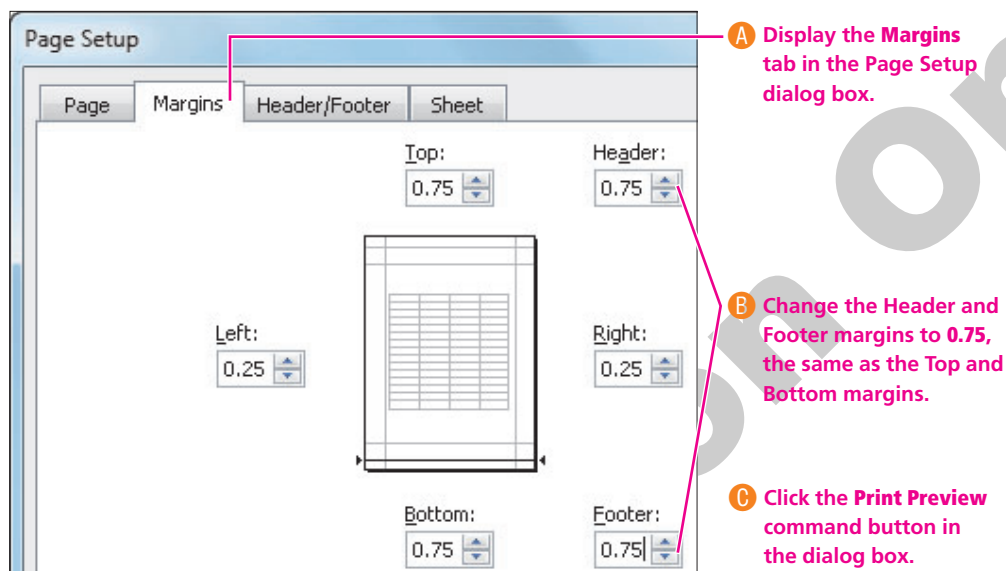
10. Select the **left** header section (display the Design Ribbon, if necessary), click the **Sheet Name** button, **type** a comma, **tap** [Spacebar], and then click the **File Name** button. The footer section displays &[Tab], &[File]. When you click outside the section, the display changes to Years 1–2, Seaview College Usage Report. You may add text, punctuation, and spaces between elements. You may tap [Enter] and add text lines to the header section, but unexpected results may occur. Always check the header and footer in the print preview of Backstage view before printing.

11. Select the **right** header section, **type** your name, and click **outside** the header.

12. Add the **current time** and **current date** to any section of the footer. Separate the two elements with punctuation or spaces so you can read each element easily.

Change the Header and Footer Margins

13. Display the **Page Layout** Ribbon and click the **dialog box launcher**  button in the bottom-right corner of the Page Setup command group.
If the commands on the Ribbon appear dimmed, make certain that the pointer is in a cell outside the header and footer.
14. Follow these steps to change the header and footer margins:

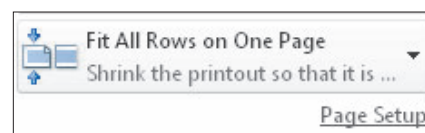



15. Examine the **header and footer** positions.
Your header should look like the following illustration.

Seaview College Usage Report

Now the header and footer are positioned farther from the top of the page but overlap the worksheet. You should always make the header and footer margins smaller than the top and bottom margins so that the header and footer print in the margin area.

16. Click the **Page Setup** link at the bottom-left corner of Backstage view.
This is another way to display the Page Setup dialog box.



17. Change the **Header and Footer** margins to an appropriate position of your choice and check the position in the print preview.
While typing the position, such as .3, in a text box, make certain to include the decimal point.
18. Return to **Page Layout** view without printing.
19. **Save**  the changes and leave the workbook **open**.

Adding a Watermark Image

Video Lesson

labyrinthelab.com/videos

A watermark is a lightly shaded notation such as *Confidential* or *Draft*, or a logo that appears behind document data. Excel does not include a watermark command as Microsoft Word does. You can, however, add a photo or transparent image you created in a graphics program to a header or footer to achieve a watermark effect on each page of the worksheet. The image must be larger than the header or footer area in which you place it. After the Picture command on the Header & Footer Tools Design toolbar is used to insert the image, the header or footer section displays &[Picture]. The image is not displayed in the worksheet until you deselect the header or footer. You can size and scale the image after inserting it in the worksheet. You also can change the brightness and contrast of some images with an acceptable result.

1.5	1.5	0.0	0.0	3.5	0.0	0.0	0.0	2.0	3.0
35.0	19.5	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	14.0	17.5	17.5	12.5	0.0	24.0	35.0	19.5
5.5	7.0	9.5	4.5	13.0	4.5	6.5	3.0	0.5	12.0
18.5	27.0	18.5	6.0	5.5	25.5	10.0	8.5	16.0	8.0
35.0	19.5	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

A logo watermark is displayed behind worksheet data on each printed page.

Applying a Worksheet Background

The worksheet background normally appears white with the cell gridlines displayed. But, you can use a photo or other image to fill the background and then turn off the gridlines. For example, you can apply a background photo to promote your organization or products when you publish a workbook as a web page. The background image is repeated across and down the sheet, which requires that the original image be scaled appropriately and contrast well with the worksheet text colors. The image cannot be adjusted in Excel. You might want to temporarily display the word *Draft*, as shown in the illustration below and to the right. The background image, however, is not included on a printed worksheet.

Seaview College Usage Report			
	Year 1	Year 2	Total
Alumni	75.5	112.5	188.0
Faculty	569.0	907.5	1476.5

A photo background should contrast well with worksheet text.

Seaview College Usage Report			
	Year 1	Year 2	Total
Alumni	75.5	112.5	188.0
Faculty	569.0	907.5	1476.5

A background image can be used temporarily and then removed.


QUICK REFERENCE

ADDING A WATERMARK AND BACKGROUND TO SHEETS

Task

Add a watermark image to a worksheet

Procedure


- Select the left, center, or right section of the header or footer.
- Choose Design→Header & Footer Elements→Picture , navigate to the desired image, and click Insert.
- Choose Design→Header & Footer Elements→Format Picture and adjust the size, cropping, and image control as desired.

QUICK REFERENCE**ADDING A WATERMARK AND BACKGROUND TO SHEETS (continued)****Task****Procedure**


Remove a watermark image

- Click in the appropriate header or footer section, which selects `&[Picture]`, and tap **Delete**.

Apply a repeating background to a worksheet

- Choose Page Layout→Page Setup→Background  from the Ribbon, navigate to the desired image file, and click Insert.

Remove a background

- Choose Page Layout→Page Setup→Delete Background  from the Ribbon.

DEVELOP YOUR SKILLS 7.3.4**Apply a Watermark and Background to Sheets**


In this exercise, you will add a watermark effect to all pages of the Years 1–2 worksheet. You also will use a “Draft” image in the background of the Summary sheet to serve as a temporary reminder that the sheet is not final.

Add a Watermark Image

- Display the **Years 1–2** sheet of the Seaview College Usage Report workbook in Page Layout view, if necessary.

- Select the **center** section of the header.

The codes for the page numbering that you set in an earlier exercise are selected. You will replace the page numbering in the next step.

- Choose **Design→Header & Footer Elements→Picture** , navigate to the Lesson 07 folder in your file storage location, select **Company Watermark**, and click **Insert**. The header section displays the code `&[Picture]`, but the image is not displayed while the header is selected.

- Click any cell in the worksheet to deselect the header. The image containing “My Virtual Campus” displays at about row 14 and is horizontally centered on the sheet because you selected the center header section. The image was created in Windows Paint and has a grayscale shade applied to contrast with the worksheet text. The image appears on every page of the worksheet.

13	2.0	16.0	4.5
14	3.0	0.0	0.0
15	4.0	1.5	1.5
16	24.0	35.0	19.5

- Scroll right** to view the same watermark on page 2.

The watermark is layered under the cell contents, so the fill applied to cells in column AB partially covers the image.

- Tap** **[Ctrl] + [P]** to display the Print tab of Backstage view, and notice in the print preview that the watermark would print.


A watermark displays only in Page Layout view and the print preview in Backstage view.

- Tap** **[Esc]** to exit Backstage view without printing, and then **tap** **[Ctrl] + [Home]** to return to cell A1.

- Save**  the changes.


Apply a Background

You will add the word “Draft” throughout the Summary sheet as a reminder that the sheet is not final. An image file has been created for this purpose.

9. Display the **Summary** sheet of the Seaview College Usage Report in Normal view.
10. Choose **Page Layout**→**Page Setup**→**Background**  from the Ribbon, navigate to the Lesson 07 folder in your file storage location, select **Draft Image**, and click **Insert**.


Seaview College Usage Report			
	Year 1	Year 2	Total
Alumni	75.5	112.5	188.0
Faculty	569.0	907.5	1476.5

The word “Draft” repeats across and down the entire worksheet. Excel tiles as many copies of the image as will fit based on the image size.

11. Tap **Ctrl** + **P** to display the Print tab of Backstage view, and notice in the print preview that the background would *not* print.
12. **Exit** from Backstage view without printing.
13. **Save**  the changes, and leave the workbook **open**.

Setting Title Rows and Columns

Video Lesson labyrinthlab.com/videos

 You may specify one or more rows as title rows and one or more columns as title columns. Title rows and columns are printed on every page of a worksheet. For example, recall that the Years 1–2 worksheet prints on multiple pages. Rows 1–4 contain worksheet titles and the column headings, and columns A–C contain the people and categories that describe the content of the various rows. Without that information, the data on the second page may be difficult to understand. This problem can be resolved by specifying rows 1–4 as title rows and columns A–C as title columns so that they appear on all pages. The title rows or columns are set in the Page Setup dialog box.

Years 1-2, Seaview College Usage Report								
Seaview College Usage Report								
Last Name	First Name	Category	Aug	Sep	Oct	Nov	Dec	Totals
Do	Alan	Alumni	0.0	0.0	2.5	0.0	3.0	79.0
Johnson	Chriss	Alumni	2.0	4.5	11.5	13.0	7.0	84.5
Nguyen	Jimmy	Alumni	0.0	0.0	0.0	2.0	3.0	24.5

Page 2 of a printed worksheet with title rows and title columns repeating on every page



The Title Rows and Title Columns options are not available if you display the Page Setup dialog box from within the Print tab of Backstage view. To use these options, you must launch the Page Setup dialog box from the Page Layout Ribbon.

Sheet Options

The Sheet command group of the Page Layout Ribbon contains options that affect the worksheet view and all printed pages of the worksheet. You may choose some options separately for viewing the worksheet and for printing.

Gridlines

By default, light gray gridlines surround every cell in the worksheet view. Normally you should leave that option on, but you may view the worksheet without gridlines. By default, gridlines do not print. In large worksheets, you may find it useful to print with gridlines to help the eyes track data across rows and down columns.

Gavins	Gabrielle	Student	10.0	0.0
Grisson	Madison	Student	2.0	7.5
Kim	Tai Lee	Student	0.0	4.0

The printed worksheet without gridlines (the default setting)

Gavins	Gabrielle	Student	10.0
Grisson	Madison	Student	2.0
Kim	Tai Lee	Student	0.0

The printed worksheet with gridlines

Headings

By default, column headings (letters A, B, and so on) and row headings (numbers 1, 2, and so on) display in the worksheet view. You rarely would need to turn the display off. By default, these headings do not print. Including the headings may be useful for worksheet design, training, and group discussions.

	A	B	C	D
1	Seaview College Usage Report			
2				Year 1
3				
4	Last Name	First Name	Category	Jan
5	Do	Alan	Alumni	0.0
6	Johnson	Chriss	Alumni	0.0
7	Nguyen	Jimmy	Alumni	0.0

The printed worksheet with column and row headings


QUICK REFERENCE

SETTING TITLES, GRIDLINES, AND HEADINGS


Task

Procedure

Print title rows on every page

- Choose Page Layout→Page Setup→Print Titles  from the Ribbon.
- Click in the Rows to Repeat at Top box.
- Drag to select the desired rows in the worksheet.
- Click Print Preview or OK.

Print title columns on every page

- Choose Page Layout→Page Setup→Print Titles  from the Ribbon.
- Click in the Columns to Repeat at Left box.
- Drag to select the desired columns in the worksheet.
- Click Print Preview or OK.

Print gridlines

- Choose Page Layout→Sheet Options→Gridlines→Print from the Ribbon.

Print Excel column and row headings


- Choose Page Layout→Sheet Options→Headings→Print from the Ribbon.

DEVELOP YOUR SKILLS 7.3.5

Set Sheet Options

In this exercise, you will set options to print repeating title rows and title columns, gridlines, and row and column headings on a multipage worksheet.

Set Title Rows and Columns

1. Display the **Years 1–2** worksheet in Page Layout view at a zoom percentage that is comfortable for you.
2. Tap **Ctrl** + **Home** to jump to **cell A1**.
3. Choose **Page Layout** → **Page Setup** → **Print Titles**  from the Ribbon. The *Page Setup* dialog box displays with the *Sheet* tab active.
4. Follow these steps to set title rows and title columns:

- A** If necessary, drag the *Page Setup* dialog box by its title bar to make **columns A–C** and **rows 1–4** visible.

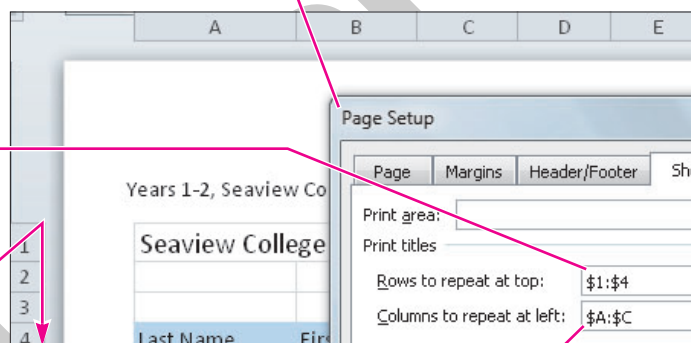
- B** Click in the **Rows to Repeat at Top** box, which is currently empty.

- C** Drag to select **rows 1–4**. A flashing marquee appears around the rows. The **Rows to Repeat at Top** box should display **\$1:\$4**.

- D** Click in the **Columns to Repeat at Left** box, which is currently empty.

- E** Point to the column selector for **column A** and drag right to include **columns B and C**. A flashing marquee appears around the columns. The **Columns to Repeat at Left** box should display **\$A:\$C**.

- F** Click the **Print Preview** command button in the lower half of the dialog box.

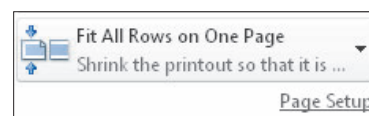


5. Click the **Next Page** button below the print preview in Backstage view, and then click the **Zoom to Page** button in the lower-right corner to zoom in.



Examine the results for page 2 in the print preview. The title rows and columns repeat on every page of the printed worksheet. Now it is easier to identify the people, categories, and months that belong to each row of data on page 2.

6. Click **Page Setup** at the bottom-left corner of Backstage view, select the **Sheet** tab in the *Page Setup* dialog box, and notice that the **Print Titles** section is unavailable.



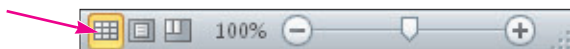
The *Page Setup* dialog box must be displayed through the *Page Layout* Ribbon if you want to set print titles.

7. Click **Cancel** to exit the Page Setup dialog box.

8. **Exit** Backstage view without printing.

Turn Gridlines and Headings On and Off

9. Click the **Normal** view button in the lower-right corner of the window.



10. Choose **Page Layout**→**Sheet Options**→**Gridlines**→**View** from the Ribbon to turn off the option.

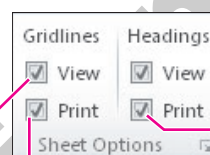
The lines around the cells disappear. Occasionally you might want to turn off gridlines to help proofread or identify borders you applied manually around cells.



11. Follow these steps to turn gridlines back on and to display gridlines and headings when you print:

A Choose **Page Layout**→**Sheet Options**→**Gridlines**→**View** from the Ribbon to turn on the option again. (The view options affect only how the worksheet displays and do not affect printing.)

B Place a checkmark in the **Gridlines Print** option box.



C Place a checkmark in the **Headings Print** option box.

You do not see the effect of these last two settings in either Normal or Page Layout views.

12. Choose **File**→**Print** and click the **Zoom to Page**  button in the lower-right corner of Backstage view to zoom in, if necessary.

Gridlines appear as dotted lines but will print as solid lines. The column headings (A, B, and so on) and row headings (1, 2, and so on) also display above and to the left of the worksheet. You must display the print preview in Backstage view to see these effects.

13. **Exit** Backstage view without printing.

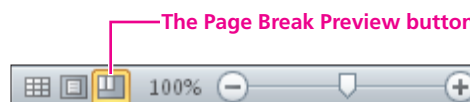
14. **Save**  the changes and leave the workbook **open**.

Working with Page Breaks

Video Lesson

labyrinthlab.com/videos

You may use Page Break Preview to see where Excel's automatic page breaks occur in a worksheet and which part of the worksheet will be printed. This view also allows you to insert additional page breaks manually when they are needed. In Page Break Preview, the print area of the worksheet appears in white and nonprinting areas appear in gray.



Adjusting Automatic Page Breaks

Excel formats most printed worksheets by inserting automatic page breaks when pages are full. An automatic page break appears as a dashed line.

U	V	W	X	Y	Z	AA	AB	AC
0.0	8.5	16.5	0.0	4.0	6.0	14.5	79.0	
0.0	0.0	14.5	6.0	14.5	18.0	17.5	177.5	
0.0	1.5	18.0	14.0	22.5	33.5	13.0	306.0	

Excel inserts an automatic page break, which appears as a dashed line.

At times, you may want to force a page break in a different place. For example, in the Years 1–2 worksheet, Excel splits a year by printing some of the year 2 month columns on the first page and the remaining month columns on the second page. All columns for a given year should be printed on the same page. You may adjust the location of a page break by clicking and dragging it in Page Break Preview. The page break then displays as a solid line, indicating that it is a manual page break.

P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Year 2													
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
9.5	4.5	0.0	2.0	0.0	0.0	1.5	0.0	0.0	2.5	0.0	3.0	79.0	
4.5	9.0	8.5	6.0	4.5	3.5	0.0	2.0	4.5	11.5	13.0	7.0	84.5	
0.0	4.0	1.5	1.5	0.0	0.0	3.5	0.0	0.0	0.0	2.0	3.0	24.5	

The two-headed arrow indicates that the page break is being dragged to the left. A page break that you move or add appears as a solid line.



An automatic page break indicates that the page is filled, so you must move a vertical page break to the left to shift columns to the next page. Move a horizontal page break up to shift rows to the next page. You cannot increase columns or rows on a full page without adjusting other print options.

Inserting and Removing Page Breaks








Even if the worksheet fits on one page, at times you may need to add a page break. For example, you might want the data for each six-month period to print on separate pages. You must select a cell in an appropriate column or row before issuing the Insert Page Break command. The page break appears as a solid line in the column to the left of the selected cell or the row above the selected cell. You may remove any page break that you set manually. If necessary, Excel will insert automatic page breaks after you remove manual page breaks.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Seaview College Usage Report																
2				Year 1												Year 2	
3																	
4	Last Nar	First Na	Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Fe
5	Do	Alan	Alumni	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	14.5	18.0	17.5	9.5	4.
6	Johnson	Chriss	Alumni	0.0	0.0	3.5	0.0	0.0	0.0	2.0	3.0	0.0	2.0	0.0	0.0	4.5	9.
7	Nguyen	Jimmy	Alumni	0.0	2.0	0.0	0.0	1.5	0.0	0.0	2.5	0.0	3.0	0.0	0.0	0.0	4.

The worksheet with page breaks added manually, shown as solid lines

QUICK REFERENCE**SETTING PAGE BREAKS**

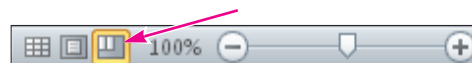
Task	Procedure
Adjust an automatic page break	<ul style="list-style-type: none"> Choose the Page Break Preview  button from the Status Bar at the bottom-right corner of the window. Drag a vertical dashed automatic page break line to the left or a horizontal page break line up. Observe the page break change to a solid line to indicate a manual page break.
Add a manual page break	<ul style="list-style-type: none"> Choose the Page Break Preview  button from the Status Bar at the bottom-right corner of the window. Select a cell below or to the right of the desired page break location. Choose Page Layout→Page Setup→Breaks  menu ▼→Insert Page Break from the Ribbon, or right-click the cell and choose Insert Page Break from the context menu.
Remove a manual page break	<ul style="list-style-type: none"> Choose the Page Break Preview  button from the Status Bar at the bottom-right corner. Select the cell to the right of the desired vertical page break line or below a horizontal page break line. Choose Page Layout→Page Setup→Breaks  menu ▼→Remove Page Break from the Ribbon, or right-click the cell and choose Remove Page Break from the context menu.

DEVELOP YOUR SKILLS 7.3.6**Work with Page Breaks**

In this exercise, you will move, add, and remove a page break in Page Break Preview.

Display Page Break Preview

1. Tap **Ctrl** + **Home** to display **cell A1**, if necessary.
2. Choose the **Page Break Preview** button from the Status Bar at the bottom-right corner of the window.
3. If the Welcome to Page Break Preview dialog box appears, click **OK** to close the dialog box. The words *Page 1* and *Page 2* on the worksheet indicate the area to be printed on each page. You should see a dark blue, dashed automatic page break line between columns V and W. The columns for the months of year 2 are split between two pages. You will adjust the page break to force the January column of year 2 to the next page.




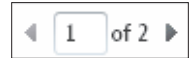
Adjust a Page Break

4. Click anywhere on the **blue automatic page break line** and drag to the **left** until it is to the left of **column P**.

P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
Year 2													
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals	
9.5	4.5	0.0	2.0	0.0	0.0	1.5	0.0	0.0	2.5	0.0	3.0	79.0	
4.5	9.0	8.5	6.0	4.5	3.5	0.0	2.0	4.5	11.5	13.0	7.0	84.5	
0.0	4.0	1.5	1.5	0.0	0.0	3.5	0.0	0.0	0.0	2.0	3.0	24.5	


The data for January through July will now print on page 2 along with the data for the rest of that year. The worksheet still fits on two pages.

5. Select a cell anywhere on **page 1**.
6. Choose **File→Print**.
7. Click the **Zoom to Page**  button at the lower-right corner of the print preview in Backstage view to zoom in, if necessary, and scroll page 1 to the right.
Page 1 ends with column O, which contains the December data for year 1.
8. Click the **Next Page** button below the print preview in Backstage view.
Page 2 contains the names and categories in columns A–C and then displays column P containing the January data for year 2.
9. **Exit** Backstage view without printing.



Insert and Remove a Page Break


10. In **Page Break Preview**, select any cell in **column J**, which contains July data.

11. Choose **Page Layout→Page Setup→Breaks**  menu ▼→**Insert Page Break** from the Ribbon.
A solid blue, manual page break line now appears to the left of column J.

H	I	J	K
May	Jun	Jul	Aug
0.0	0.0	0.0	0.0
0.0	0.0	2.0	3.0

12. Point to any cell in **column V**, right-click, and choose **Insert Page Break** on the context menu.
Do not move the pointer off column V as you right-click.

You may add or remove page breaks by choosing a command either on the Ribbon or in the context menu.

13. Use either method you have just learned to add a page break to the left of **column AB**.
The worksheet would now print on five pages. Next you will remove all but one page break.
14. Select any cell in **column J**.
15. Choose **Page Layout→Page Setup→Breaks**  menu ▼→**Remove Page Break** from the Ribbon.
16. Point to any cell in **column V**, right-click, and choose **Remove Page Break** in the context menu.

17. Use either method you have just learned to remove the page break to the left of **column AB**.

The worksheet should now contain only one page break to the left of column P.

18. **Save**  your changes and **print**  the worksheet.

19. **Close**  the workbook.

7.4 Concepts Review

Concepts Review labyrinthelab.com/excel10

To check your knowledge of the key concepts introduced in this lesson, complete the Concepts Review quiz by going to the URL listed above. If your classroom is using Labyrinth eLab, you may complete the Concepts Review quiz from within your eLab course.




Reinforce Your Skills

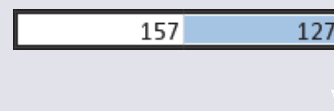
REINFORCE YOUR SKILLS 7.1

Insert Formulas and Sort Rows

In this exercise, you will open a workbook that contains an accounts receivable aging report. You will create formulas to calculate the number of days the accounts are past due. You will also sort the rows.






Create the Formulas

1. **Open** the rs-Aging Report workbook from the Lesson 07 folder in your file storage location.
2. If necessary, **maximize**  the window.
3. Type **7/1/14** in **cell B2**.
The date displays in Date format with the year as four digits. The year matches the invoice dates in column D.
4. Select **cell F5** and enter the formula **=B\$2-D5**.
This formula calculates the number of days between July 1 and the invoice date. Cell B2 must be an absolute cell reference in the formula.
5. Select **cell G5** and enter the formula **=F5-30**.
An invoice is considered past due if not paid within 30 days.
6. Select the **range F5:G5**, and use the fill handle to copy the formulas down their columns for all customers.



Sort the Rows

Notice that the rows currently are unsorted.

7. Select **cell A5** and choose **Data→Sort & Filter→Sort A to Z**  from the Ribbon.
The rows are sorted by the account numbers in column A.
8. Select **cell E5**, and choose **Date→Sort & Filter→Sort Z to A**  from the Ribbon.
The rows are in descending order by the invoice amount. The largest amount should appear at the top of the list.
9. Select **cell G5**, and choose **Data→Sort & Filter→Sort Z to A**  from the Ribbon.
The rows now are sorted by the number of days past due from highest to lowest.
10. **Save**  the changes and **close**  the workbook.

REINFORCE YOUR SKILLS 7.2

Use Multiple Sort Keys

In this exercise, you will use the Sort dialog box to sort worksheet rows using two sort keys. Then you will sort using three sort keys.

1. **Open** the rs-Balance Due Report workbook from the Lesson 07 folder.

Notice that the list is currently sorted by the Account Number column.

2. Select any data cell below the **row 3** headings.

Sort on Two Sort Keys

3. Choose **Data**→**Sort & Filter**→**Sort**  from the Ribbon.

Excel will identify the list and select the correct rows. The header row will not be selected.

4. Change the first Sort By level to **Outstanding Balance**, and set sorting on values in **Z to A** order.

5. Add a second level, set the Then By key to **Account Number** and sorting on values in **smallest to largest** order, and click **OK**.

Lastname	Firstname	Account Number	Outstanding Balance
Ochoa	Carlos	00012364	Y
Smith	Sandra	00012987	Y
Carlton	Debra	00013418	Y

Take a moment to study the results. Notice that rows with an Outstanding Balance of “Y” move to the top of the list because you sorted in descending order. Records in the “Y” and “N” groups are then sorted by account number.

Sort on Three Sort Keys

6. Choose **Data**→**Sort & Filter**→**Sort**  from the Ribbon.


Now you will change the sort order within the Outstanding Balance groups to last name. Any same last names will then be sorted by first name.

7. Change Then By to **Lastname** in the second level, with sorting on values in **A to Z** order.

8. Add a third level, set the Then By key to **Firstname**, with sorting on values in **A to Z** order, and then click **OK**.

Lastname	Firstname	Account Number	Outstanding Balance
Adams	Latonya	00014321	Y
Carlton	Debra	00013418	Y
Carlton	Nico	00028937	Y
Dip	Visith	00030279	Y


Records in the “Y” and “N” groups are sorted by last name within each group. The same last names are grouped together and then sorted by first name (Carlton, Debra comes before Carlton, Nico).

9. **Save**  the changes and **close**  the workbook.

REINFORCE YOUR SKILLS 7.3

Create a Custom Footer

In this exercise, you will remove a footer and create a custom footer. You will also preview and print the worksheet.

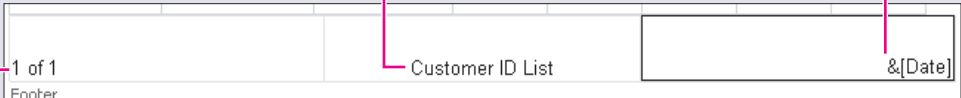
1. **Open** the rs-Customer ID List from the Lesson 07 folder.
2. Display **Page Layout view** by clicking its button in the lower-right corner of the window.
3. Select any section of the **footer**.
Next you will remove the existing footer.
4. Choose **Design**→**Header & Footer**→**Footer**  **menu ▼** and choose **(None)** from the top of the list.
5. Follow these steps to create a custom footer and format the footer:

A In the left footer section, choose **Design**→**Header & Footer Elements**→**Page Number**, tap **[Spacebar]**, type **of**, tap **[Spacebar]**, and choose **Design**→**Header & Footer Elements**→**Number of Pages**.




B Tap **[Tab]** to move to the center footer section and type **Customer ID**.

C Tap **[Tab]** to move to the right footer section and insert the code for the current date.

D Select a cell outside the footer.



The custom footer displays below the worksheet in Page Layout view.

6. Choose **File**→**Print**.
The footer is displayed in the print preview.
7. **Print**  the worksheet.
8. **Save**  the changes and **close**  the workbook.

REINFORCE YOUR SKILLS 7.4

Arrange Worksheet Windows

In this exercise, you will open two workbooks and arrange the windows horizontally in order to compare expense data between sheets. You will also copy and paste data from one workbook to the other.

Open the Workbooks

1. **Open** the rs-Expenses Area 3 workbook from the Lesson 07 folder in your file storage location.
2. **Open** the rs-Expenses Area 5 workbook.

Arrange Windows


3. Choose **View**→**Window**→**Switch Windows**→**2 rs-Expenses Area 3** from the Ribbon.
The Area 3 worksheet is in the active window.

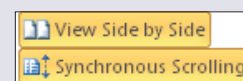
4. Choose **View**→**Window**→**Arrange All** from the Ribbon, select **Horizontal** in the Arrange Windows dialog box, and click **OK**.

rs-Expenses Area 3					
	A	B	C	D	E
1	Expenses	Area 3			
2					
3		<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>
4	Travel	325	345	365	385
5	Meals	150	170	190	210
6	Vehicle	245	270	295	320
7	Parking, Tolls	22	41	0	25
8					
9					
10					
11					



rs-Expenses Area 5					
	A	B	C	D	E
1	Expenses	Area 5			
2					
3		<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>
4	Travel	245	270	295	320
5	Meals	325	345	365	385
6	Vehicle	150	170	190	210
7	Parking, Tolls	26	72	52	41
8					
9					
10					
11					

The Area 3 worksheet window appears above the Area 5 worksheet window.

5. Choose **View**→**Window**→**View Side by Side**  from the Ribbon; verify that the **Synchronous Scrolling** option is turned on in the Ribbon.




Copy and Paste Data between Windows

6. In the **Area 3** worksheet in the top window, select and copy the column headings in the range **B3:N3**.
7. In the **Area 5** worksheet in the bottom window, select **cell B3** and paste.
8. Scroll in either window until **column N** is in view.
Both windows scroll in synch to display the Total column because the Synchronous Scrolling option is on.
9. In the **Area 3** worksheet in the top window, select the range **N4:N7** and choose **Home**→**Editing**→**Sum** from the Ribbon.
The formula in each row sums the expense for January–December.
10. Copy the range **N4:N7** and paste to **cell N4** in the **Area 5** worksheet.
You can copy and paste formulas as well as data to another sheet.
11. **Save**  the changes in each workbook and **close**  them.


REINFORCE YOUR SKILLS 7.5

Print a Large Worksheet on One Page


In this exercise, you will set a worksheet to print on a single page. You will accomplish this by using landscape orientation and the Scale to Fit option. You also will add a header and experiment with paper size options.

1. **Open** the rs-Volume Comparison workbook from the Lesson 07 folder.
2. Display **Page Layout view** by clicking its button in the lower-right corner of the window.
Notice that the worksheet currently is in portrait orientation with the narrow edge of the page on top.
3. Drag the **Zoom** slider in the lower-right corner of the window to a percentage that allows you to see all the pages.
The worksheet is three pages wide and one page high. In the remainder of this exercise, you will adjust settings in the Page Layout Ribbon to fit this worksheet on a single page.
During the remainder of this exercise, change the zoom level as needed.
4. Choose **Page Layout**→**Page Setup**→**Orientation**  menu ▼→**Landscape** from the Ribbon.
The worksheet now is two pages wide and one page high.



Change the Paper Size

5. Choose **Page Layout**→**Page Setup**→**Size**  menu ▼→**Legal 8.5" x 14"** from the Ribbon.
More columns fit on page 1. Printing on wider paper and making a few other adjustments may fit a worksheet on fewer pages. Assume, however, that you want to use only letter-size paper because you find it inconvenient to switch paper in your printer and store wide printouts in notebooks and file folders.
6. Change the paper size back to **Letter 8.5" x 11"**.

Launch the Page Setup Dialog Box

7. Click the **dialog box launcher**  button in the bottom-right corner of the Page Setup command group of the Page Layout Ribbon.
The Page Setup dialog box appears with the Page tab displayed. If a different tab is active, click the Page tab. Notice that the Orientation and Paper Size options are available in the dialog box as well as on the Ribbon. Also notice that the dialog box contains command buttons to jump to the Print tab of Backstage view and Print Preview.
8. Click **Cancel** to exit the dialog box without making any changes.

Scale the Worksheet and Add a Header

9. Choose **Page Layout**→**Scale to Fit**→**Width menu ▼**→**1 Page** from the Ribbon.
Now the worksheet fits on one page. The worksheet originally was one page high, so it is not necessary to change the Height option.
10. Select any section of the **header**.
11. Choose the predefined header **Page 1 of ?**.
12. **Save**  the changes and **close**  the workbook.


Apply Your Skills



APPLY YOUR SKILLS 7.1


Sort on Multiple Sort Keys

In this exercise, you will sort the rows in a worksheet using three sort keys.

1. **Open** the as-Orders workbook from the Lesson 07 folder in your file storage location.
2. If necessary, **maximize**  the window.
3. Format the numbers in **column D** as **Comma style** with **no decimal places**.
4. **AutoFit** all column widths.
Notice that the rows are currently sorted by Sales in column D.
5. Use the **Sort** dialog box to sort the rows using three sort keys: **key 1**, Area in smallest to largest order; **key 2**, Customer in A to Z order; and **key 3**, Sales in largest to smallest order.
The rows for each customer will be sorted within groups by modules according to their sales prices.

Your completed worksheet should match the following example.

	A	B	C	D
1	Orders			
2				
3	Area	Customer	Module	Sales
4	1	Draper University	Core 3	55,095
5	1	Draper University	Billing	16,650
6	1	Draper University	Employment	13,350
7	1	Draper University	Support 3	4,950
8	1	Western State College	Core 1	37,750
9	1	Western State College	Billing	15,595
10	1	Western State College	Support 1	3,095
11	3	Jennerstown Academy	Core 1	36,995
12	3	Jennerstown Academy	Billing	15,595
13	3	Jennerstown Academy	Support 1	3,095
14	5	North Chauwakeegan State	Core 2	52,795
15	5	North Chauwakeegan State	Support 1	3,095
16	7	University of Norwood	Core 3	56,095
17	7	University of Norwood	Billing	15,595
18	7	University of Norwood	Support 2	3,295
19	7	University of Norwood	Upgrade Protection	895
20	8	Olson College	Core 2	54,150
21	8	Olson College	Billing	15,595
22	8	Olson College	Support 2	3,295
23	10	Underwood College	Core 2	53,995
24	10	Underwood College	Support 2	3,295
25	10	Underwood College	Upgrade Protection	895

6. **Save**  the changes, **print**  the worksheet, and **close**  the workbook.

APPLY YOUR SKILLS 7.2

Print a Large Worksheet on One Page



In this exercise, you will use the Page Layout Ribbon to format the worksheet so that it prints on one page. You also will include a header and footer.

1. **Open** the as-Maria Fernandez Expenses workbook from the Lesson 07 folder.
2. Display the **Page Layout** Ribbon and change the orientation.
3. Change the **margins** or use the **Scale to Fit** options so that the worksheet will print on **one page**.
4. Add the **header and footer** shown in the following illustration. Use the **current date**.
5. **Type** your name in the footer.
6. Use **Print Preview** to review the worksheet before printing.

Your printed worksheet should fit on one page, as in the following example, showing the top and bottom of the page.

as-Maria Fernandez Expenses												
Expenses	Maria Fernandez			Area 3								
	January	February	March	April	May	June	July	August	September	October	November	December
Travel	325	345	365	385	405	425	205	240	275	310	345	380
Meals	150	170	190	210	230	250	176	70	125	180	235	290
Vehicle	245	270	295	320	345	370	205	220	235	250	265	280
Parking, Tolls	22	41	0	25	39	7	26	72	52	41	38	47




11/13/2014	1 of 1	Student Name
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7. **Save**  the changes, **print**  the worksheet, and **close**  the workbook.

APPLY YOUR SKILLS 7.3

Print a Large Worksheet on Two Pages

In this exercise, you will use the Page Layout Ribbon to format the worksheet so that it prints a title column and gridlines. You also will adjust the page break to balance the amount of data printed on each page.

1. **Open** the as-David Sutton Expenses workbook from the Lesson 07 folder.
2. Display the **Page Layout** Ribbon and turn on **gridlines** for printing.
3. Set **column A** as a title column on every page.
Do not change the orientation from portrait.
4. Adjust the page break so that **page 2** contains the July–December expenses.
5. **Save**  the changes, **print**  the worksheet, and **close**  the workbook.
Your two-page printout should match the following example.

	January	February	March	April	May	June
Travel	245	270	295	320	345	370
Meals	325	345	365	385	405	425
Vehicle	150	170	190	210	230	250
Parking, Tolls	26	72	52	41	38	47

	July	August	September	October	November	December
Travel	205	220	235	250	265	280
Meals	205	240	275	310	345	380
Vehicle	15	70	125	180	235	290
Parking, Tolls	22	41	0	25	39	7

Critical Thinking & Work-Readiness Skills



In the course of working through the following Microsoft Office-based Critical Thinking exercises, you will also be utilizing various work-readiness skills, some of which are listed next to each exercise. Go to labyrinthelab.com/workreadiness to learn more about the work-readiness skills.

7.1 View a Large Worksheet

WORK-READINESS SKILLS APPLIED

- Organizing and maintaining information
- Showing responsibility
- Solving problems

Roxana Ortega keeps My Virtual Campus Corporation records in Excel. Roxana soon realizes there are too many records to view on the screen at the same time. Open **ct-Draper University Usage Report** (Lesson 07 folder). Create a freeze pane for the last name, first name, and category. Use the scroll bar to view the Totals column in row 42, and then quickly move to the home cell. Scroll to view the totals in column AB. Save your workbook as **ct-Draper University Usage Report [Your Last Name]** in your Lesson 07 folder, and keep it open for the next exercise.

7.2 Sort a Large Worksheet

WORK-READINESS SKILLS APPLIED

- Organizing and maintaining information
- Using computers to process information
- Reasoning

Roxana wants to sort the records and analyze data at the end of the year to see who has the largest usage. Open **ct-Draper University Usage Report** (Lesson 07 folder), if necessary. Find the last data row and create a new blank row to separate the data from the total row. Custom sort the users by category alphabetically then by largest to smallest for the Totals column. Save your work, and keep the file open. If working in a group, discuss what questions the Sort feature can help answer about this worksheet. If working alone, type your response in a Word document named **ct-Questions** saved to your Lesson 07 folder.

7.3 Print a Large Worksheet

WORK-READINESS SKILLS APPLIED

- Organizing and maintaining information
- Showing responsibility
- Seeing things in the mind's eye

The data does not fit properly on one page. Roxana realizes the entire list can be printed on one or two pages if she uses page layout and print options, such as page orientation, margins, or page breaks. Help Roxana by opening **ct-Draper University Usage Report [Your Last Name]** (Lesson 07 folder), if necessary. Determine an appropriate layout that will print the worksheet on one or two pages; then set page layout and print options as necessary. Preview the layout to make certain all records will print correctly. Save and close your file when finished.

For Evaluation Only