





# BUSINESS COMPUTER INFORMATION SYSTEMS

## UNIT FOUR

### Spreadsheets

Unit 4 Introduction .....	1
Unit 4 Goals and Objective Basics .....	1
<b>I. Spreadsheet Basics.....</b>	<b>2</b>
Entering Data .....	2
Formatting .....	7
Editing Data .....	11
Shortcuts.....	15
Self Test 1: Spreadsheet Basics.....	19
<b>II. Spreadsheet Formulas.....</b>	<b>23</b>
Formulas .....	23
Project: Using Simple Formulas .....	27
Advanced Formulas .....	28
Project: Using Advanced Formulas.....	33
Self Test 2: Spreadsheet Formulas .....	34
<b>III. Spreadsheet Applications .....</b>	<b>37</b>
Project: Creating a Personal Budget.....	37
Project: Estimating Income Taxes .....	40
Creating Graphs.....	42
Project: Business Spreadsheets.....	45
Project: Balance Sheets and Profit-and-Loss statements.....	46
Self Test 3: Spreadsheet Applications .....	48
<b>IV. Review Spreadsheets.....</b>	<b>51</b>
Unit 4 Test: Spreadsheets .....	Pull-Out

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## Foreword

Business Computer Information Systems is a ten-unit high school elective that explores the use of technology applications in both business and personal situations. Occupations have transitioned from those that primarily produced things to those that manipulate and manage information. Whether it is at home, in a factory, at a school, for a business, or in an office, almost everyone today uses many forms of technology on a daily basis. This course will explore the software applications and information technologies that everyone is likely to use in business situations.

In this course the students will learn computer terminology, hardware, software, operating systems and information systems that relate to the business environment. The units will concentrate on learning the standard applications of word processing, spreadsheets, database management and graphical presentation packages. In addition, skills in personal and interpersonal communications and in communication technologies will be studied.

**The course is intended to help students arrive at the following understandings:**

- Effective communication skills and productive work habits can increase employees' success.
- Technology solutions can help employees be more productive and effective.

Keyboarding is a stated prerequisite for this course. While there are some keyboarding reviews in the course, there is no keyboarding instruction.

Business Computer Information Systems covers topics from TEKS §120.23 and §120.64.

**Business Computer Information Systems contains the following units:**

- Unit 1 — Communication Skills
- Unit 2 — Business Technology
- Unit 3 — Word Processing
- Unit 4 — Spreadsheets
- Unit 5 — Databases
- Unit 6 — Telecommunications Technology
- Unit 7 — Desktop Publishing Technology
- Unit 8 — Presentation Technology
- Unit 9 — Computer Networks
- Unit 10 — Computer Operating Systems



# Unit 4: Spreadsheets

## Introduction

This unit will continue to focus on providing you with skills that will help you to be an effective and valuable employee in the workplace. More specifically, this unit will focus on the use of spreadsheets. A spreadsheet is software used by many business professionals to work with numbers. Once you've learned some basic spreadsheet skills, you'll use math skills to write special math equations for spreadsheets. Finally, you'll learn some more advanced spreadsheet skills and use them to solve business problems.

### **Your goals for the unit include the following:**

- Understand the benefits of working with spreadsheets.
- Recognize that spreadsheets help organize, manipulate, and calculate numeric data.
- Create, format, and edit spreadsheets.
- Apply spreadsheet technology to solve a variety of business problems.
- Create tables and charts from data contained in spreadsheets.

### **The objectives for this unit include the following:**

- Set up a basic spreadsheet, change formatting, and edit appropriately.
- Use shortcuts when working with spreadsheets.
- Enter formulas into spreadsheets to perform correct mathematical calculations.
- Identify errors in formulas.
- Create tables and charts from data contained in spreadsheets.
- Create spreadsheets for a variety of uses including personal budgets, inventory, and profit/loss statements.

# I. Spreadsheet Basics

## Entering Data

Ashley started a new job working for a company whose employees travel often. One of her job responsibilities is to track how much money is being spent on travel. In other words, she needs to input, track, and calculate the money spent on airplane tickets, hotel rooms, rental cars, and more. The previous employee responsible for this task had asked coworkers to submit expenses in an e-mail and, upon receiving the information, had recorded the expenses on paper.

Ashley knows there is an easier way and decides to transfer all the data to a spreadsheet. She starts the spreadsheet by putting labels across the top and then begins to input numbers. Next, she lets the spreadsheet figure out the totals. After the spreadsheet is complete, she allows coworkers to access the spreadsheet in order to add travel expenses as they occur. Her manager recognizes how much time she is saving and refers to the spreadsheet often when making decisions.

### Objectives:

- Identify the parts of a spreadsheet.
- Enter data into a spreadsheet.
- Create a basic spreadsheet.

### Vocabulary:

**cells** - boxes or rectangles in a spreadsheet where data may be entered. It is the intersection of a column and a row.

**columns** - vertical sets of data in a spreadsheet.

**cursor** - blinking line that indicates where the next letter, number, or character will appear.

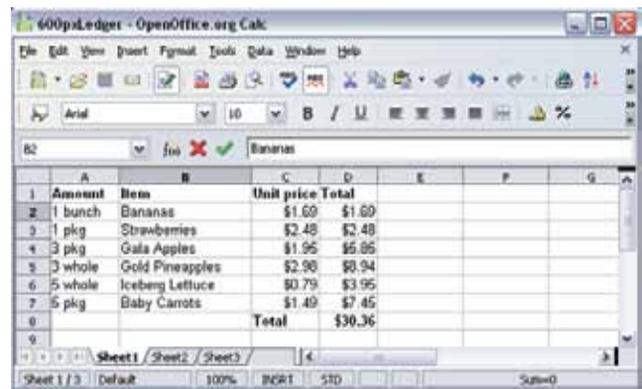
**data** - information that is stored.

**label** - any word that appears in a cell of a spreadsheet.

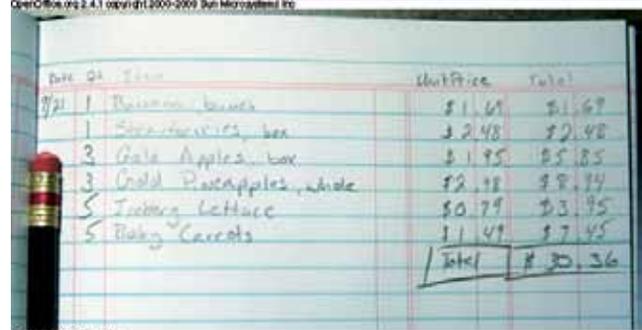
**rows** - horizontal sets of data in a spreadsheet.

A spreadsheet looks like a paper ledger or grid. However, on a paper ledger, the math that goes on behind the scenes can be very time-consuming. For example, if you had calculated a total for a list of numbers but had to change one amount, you would have to start the math all over again or perhaps even create the entire ledger sheet all over again.

Although the spreadsheet looks like a ledger, it works more like a calculator. One of the best things about using a spreadsheet is that you can change numbers without having to redo all the calculations. The spreadsheet program recalculates for you. It can add, subtract, multiply, and divide. You can plug in more complex math equations also. The spreadsheet is an invaluable tool that can make number manipulation easy.



Amount	Item	Unit Price	Total
1 bunch	Bananas	\$1.69	\$1.69
1 pkg	Strawberries	\$2.48	\$2.48
3 pkg	Gala Apples	\$1.95	\$5.85
3 whole	Gold Pineapples	\$2.98	\$8.94
5 whole	Iceberg Lettuce	\$0.79	\$3.95
5 pkg	Baby Carrots	\$1.49	\$7.45
	<b>Total</b>		<b>\$30.36</b>



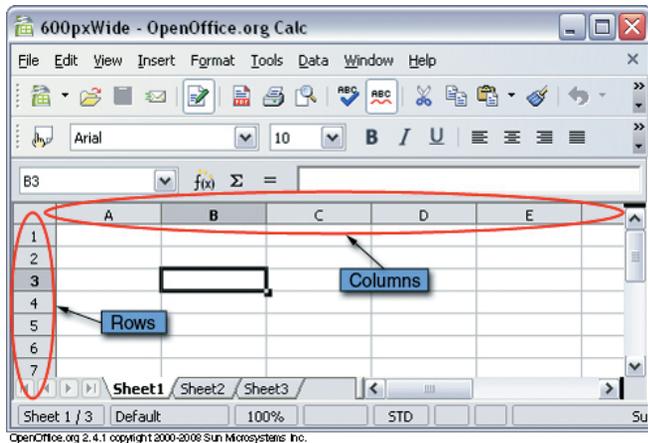
Date	Item	Unit Price	Total
7/21	1 bunch Bananas	\$1.69	\$1.69
	1 pkg Strawberries	\$2.48	\$2.48
	3 Gala Apples	\$1.95	\$5.85
	3 Gold Pineapples	\$2.98	\$8.94
	5 Iceberg Lettuce	\$0.79	\$3.95
	5 Baby Carrots	\$1.49	\$7.45
	<b>Total</b>		<b>\$30.36</b>

Who uses spreadsheets at work? Many types of business professionals use spreadsheets in their jobs. Here are a few examples:

- Teachers use a spreadsheet to calculate grades.
- Loan officers use a spreadsheet to calculate loan payments.
- Baseball statisticians use spreadsheets to track and calculate batting averages.
- Weather scientists use spreadsheets to track weather data such as precipitation and temperature.
- Stockbrokers chart stock performance on spreadsheets.

## Parts of a Spreadsheet

Rows in a spreadsheet run left to right or horizontally. **Columns** run up and down or vertically. The place where a row and a column intersect is called a **cell**. The cell looks like a rectangle. The columns are labeled with letters, and the rows are labeled with numbers. A cell at the intersection of column B and row 2 is called B2. And a cell at the intersection of column D and row 4 is called D4.



Now let's take a look at the parts of a spreadsheet.



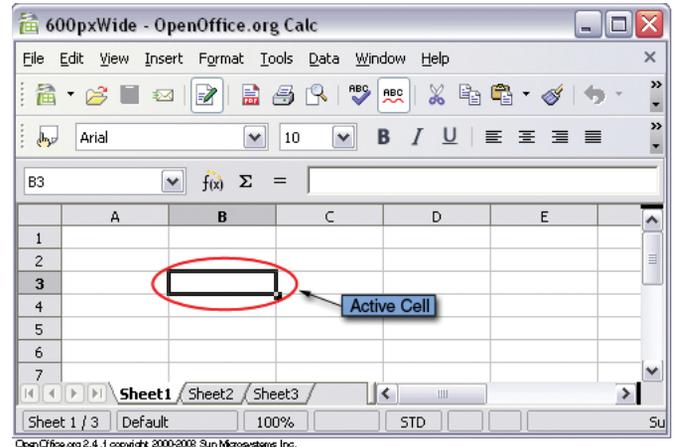
Please refer to the media CD to complete the Spreadsheet Tour.

## Note to Students:

Some of the demonstrations in this unit were created using Open Office Calc. Your spreadsheet software may use a different process than the one demonstrated. If this is the case, you will need to learn the process used by your software to complete the projects.

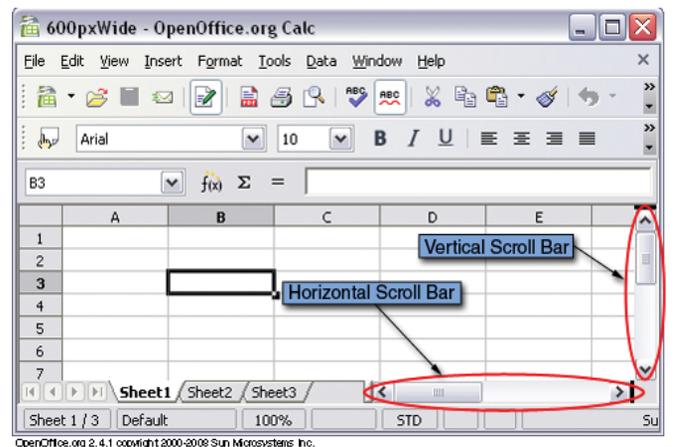
## Entering Data

Now that you can identify the parts of a spreadsheet, let's begin entering information. Before you start typing, you will need to know which cell is active. The active cell is the cell that is currently selected, and it is identified with a thicker, black border. Some spreadsheet software also has a name box at the top of the screen, which names the cell that is active.



When you start typing, the text will appear in the active cell. To change the active cell, click on another cell or use your arrow keys to move to a new cell. You may also press Tab to move to the right and Enter or Return to move down. Let's give it a try. Open a spreadsheet and take a few minutes to move around by clicking on different cells. Also practice using the arrow keys and the Tab key and Enter key.

Before entering text, it may be necessary to view parts of the spreadsheet that you cannot see. To view more columns or rows, use the scroll bars. Notice there is a scroll bar to move up and down and one at the bottom of the screen to move left and right.



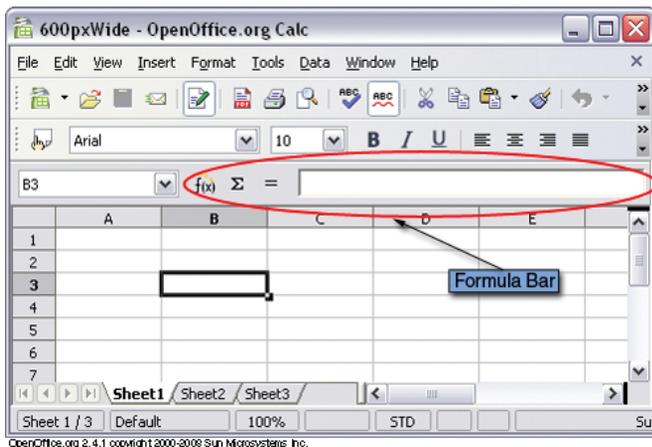
Scroll to the right and down through the spreadsheet. What happens after you scroll past column Z? The next column is labeled AA, then BB and so on. The rows and columns continue on for a long time. So don't worry about running out of room. Scroll all the way back to the left and scroll up to the top so that you see column A and row 1.

 **Your Turn**

Now you are ready to enter words and numbers into the cells. Entering data into a spreadsheet is always a three-step process.

1. Click on the cell where you want the data to go.
2. Type the number or text into the cell.
3. Press the Enter or Return key or use your mouse to click on another cell.

Click on cell A1 and type the **label**, "Budget." Click on cell A2, type "10," and press Enter. Notice that when you type letters, the text appears at the left side of the cell. Notice also when you type numbers, the numbers appear at the right side of the cell. Click on cell A3 and type "20." Did you notice that "20" appears in a white bar at the top of the spreadsheet as you are typing? This bar is called the formula bar. Once you press Enter or move to an empty cell, the formula bar becomes blank again.



What if you make a mistake when you are typing? There are a few ways to correct a mistake. If the mistake appears in the cell that is still active, you may simply press Backspace and then type the correct text. If the cell is no longer active, you may click on the cell and start typing the correct text. The new text will automatically replace the old text. Watch the following demonstration.



Please refer to the media CD to complete Correcting Data Part 1.

There are even a few more ways to correct mistakes. There are times when you do not wish to retype all the text in a cell. It is possible to delete or add text much the same way you do in a word processor. You may double-click on a cell and the **cursor** will appear. Use the mouse or arrow keys to position the cursor and then enter text and use the Backspace or Delete key as necessary. Also you may click once on a cell and click on the text in the formula bar to make changes. Watch the following demonstration.



Please refer to the media CD to complete Correcting Data Part 2.

To delete the contents in a cell or make a cell empty again, click on the cell and press Backspace or Delete. It is also possible to delete the text in several cells at one time. Just highlight the cells and press Delete. Take a few minutes to practice correcting mistakes and then delete the contents of all cells in your spreadsheet. You should now have a blank spreadsheet.

## Your Turn

Now you are ready to create a basic spreadsheet. Remember to use proper keyboarding skills and use the numeric keypad when entering a lot of numbers. Enter the following **data** into a spreadsheet:

- |                               |                             |
|-------------------------------|-----------------------------|
| In cell A2 enter Deductions   | In cell B9 enter 45789      |
| In cell A8 enter Last Name    | In cell B10 enter 41245     |
| In cell A9 enter Smith        | In cell B11 enter 39876     |
| In cell A10 enter Wilson      | In cell B12 enter 43211     |
| In cell A11 enter Thompson    | In cell C6 enter .06        |
| In cell A12 enter James       | In cell C8 enter Deduction  |
| In cell B4 enter Date:        | In cell D8 enter Net Salary |
| In cell B6 enter Rate:        |                             |
| In cell B8 enter Gross Salary |                             |

Notice that the phrase "Gross Salary" in cell B8 does not fit. It has been cut off. There is a quick fix for this. Double click on the line between the B and the C at the top of the column and watch the column adjust to the correct width. Try this again with column A.

After you save the spreadsheet, compare your spreadsheet to the sample on the media CD.



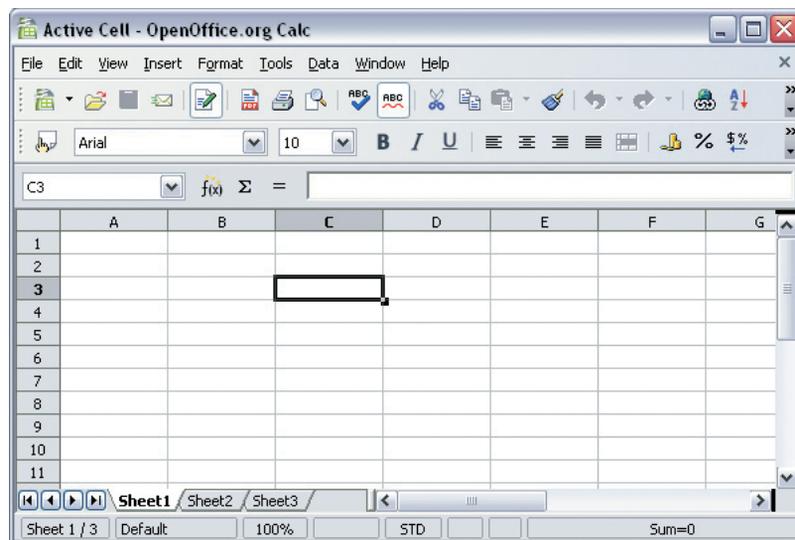
Please refer to the media CD to view the sample spreadsheet.

## Lets Review!

This lesson has presented the parts of the spreadsheet. You have learned how to move around in the spreadsheet and select an active cell. You have also learned how to enter data and correct mistakes. In the problem set, you will be asked to apply these spreadsheet skills.

## Multiple Choice

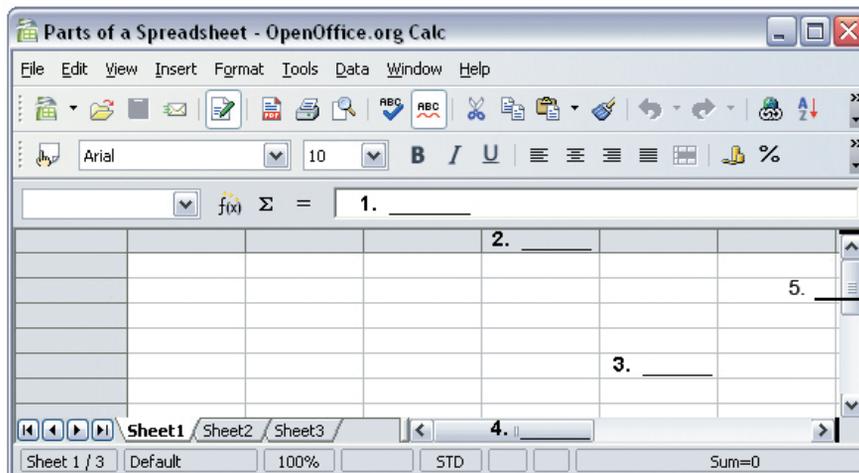
- 1.1 A spreadsheet is \_\_\_\_\_.
- A. software that allows you to create business letters
  - B. a tool for creating graphics
  - C. a program used to improve keyboarding
  - D. software used to input, track, and calculate numbers
- 1.2 Which is the active cell in this spreadsheet? \_\_\_\_\_
- A. B2
  - B. D2
  - C. C3
  - D. 3C



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1.3 Write the number from the image next to the correct label for area of the spreadsheet.

- \_\_\_\_\_ A. Horizontal Scroll Bar
- \_\_\_\_\_ B. Cell E5
- \_\_\_\_\_ C. Column D
- \_\_\_\_\_ D. Vertical Scroll Bar
- \_\_\_\_\_ E. Formula Bar



 **Multiple Choice**

- 1.4 Andrew has data in cell E14 and the cell should be blank. Andrew should \_\_\_\_\_.
- A. use the arrow keys to move to cell E13 and press Enter or Return
  - B. use the mouse to click on cell E14 and press Delete
  - C. use the mouse to click on cell E14 and press the space bar
  - D. double-click on cell E14 and type another number

 **True or False**

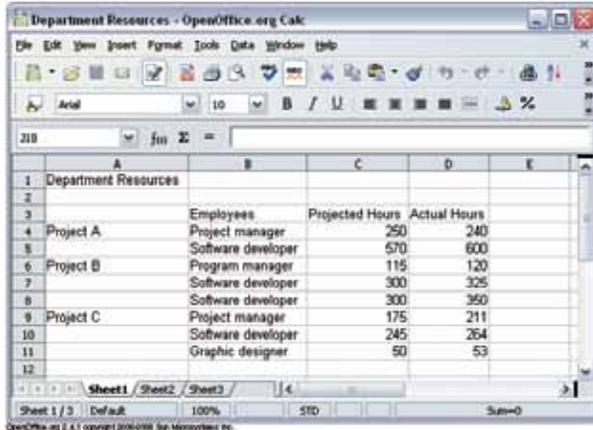
- 1.5 **True/False** The spreadsheet ends after you reach column Z and row 99.

 **Multiple Choice**

- 1.6 There are three steps for entering data into a spreadsheet. Write the letters on the blanks to place the following steps into the correct order.
- \_\_\_\_\_ 1. Step 1
  - \_\_\_\_\_ 2. Step 2
  - \_\_\_\_\_ 3. Step 3
- A. Press the Enter or Return key or use your mouse to click on another cell.
  - B. Type the number or text into the cell.
  - C. Click on the cell you want the data to go into.

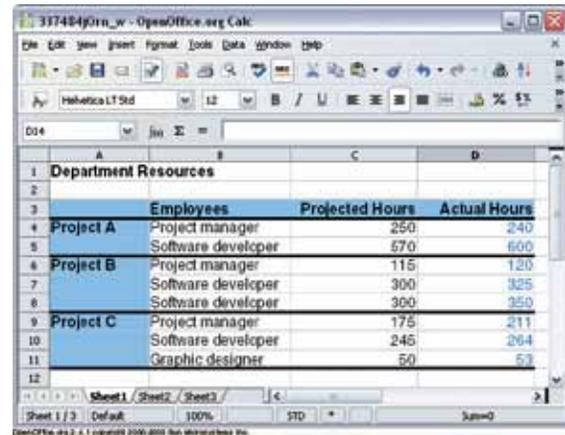
# Formatting

Craig is a program manager for a large software development company. He created a spreadsheet for his department to track resources for projects. In other words, he was tracking how many employees were working on a project and the hours spent to complete the project. This information was important to his managers. They wanted to know how much each project was costing the company. The first spreadsheet Craig created looked like this.



Department Resources	Employees	Projected Hours	Actual Hours
Project A	Project manager	250	240
	Software developer	570	600
Project B	Program manager	115	120
	Software developer	300	325
	Software developer	300	350
Project C	Project manager	175	211
	Software developer	245	264
	Graphic designer	50	53

Craig's first spreadsheet communicated all the necessary data his managers wanted. However, he wanted to make it easier to read so he made some formatting changes. His new spreadsheet looked like this.



Department Resources	Employees	Projected Hours	Actual Hours
Project A	Project manager	250	240
	Software developer	570	600
Project B	Project manager	115	120
	Software developer	300	325
	Software developer	300	350
Project C	Project manager	175	211
	Software developer	245	264
	Graphic designer	50	53

Craig made some simple formatting changes. For example, he changed the font, the style of the text, and the background color. He also added some borders. The changes only took a few minutes, and the second spreadsheet is much more attractive. These formatting changes also make it much easier to read.

## Objectives:

- Plan and design a spreadsheet.
- Change the color, font, and style of text and numbers.
- Change the alignment of text and numbers.
- Use the merge and center command.
- Change the background color.
- Add borders.
- Add special characters such as dollar signs.
- Change the format of the numbers.
- Apply auto format.

## Vocabulary:

font - a specific typeface or the way the text looks.

icon - a visual representation of something on your computer such as a program or file.

style - the way the text looks including bold, italic, and underlined.

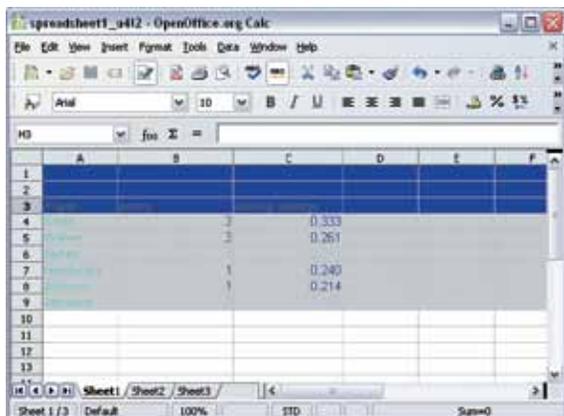
It's easy to dive right into creating a spreadsheet without putting much thought into its format and organization. However, before starting a spreadsheet, it is smarter to plan ahead and think through the design. A poorly designed spreadsheet will make it harder to enter data and harder to find the data the reader is looking for. Good design not only entails making your spreadsheet look good but also requires planning the way the data will be set up so that they will be organized logically. Before creating a spreadsheet, make some decisions about the format.

- Where are the labels going to appear?
  - Will you put a title at the top?
- Will all the data fit on one page?
  - What colors are you going to use?
- How should you group the data?
  - Do you need to use a border to separate data?
- Is the data going to run vertically or horizontally?

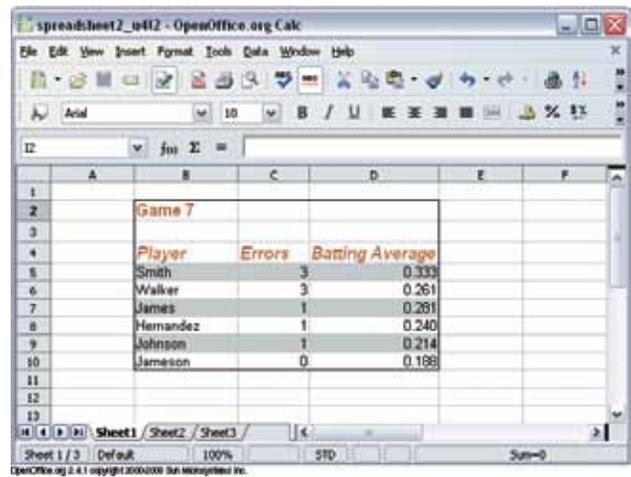
Once you have made these decisions, it's time to start creating the spreadsheet and changing the format.

Changing the format of the spreadsheet may make it easier to read. However, sometimes changing the format makes it harder to read. What if the text was yellow and the background green? This would be difficult to read. Or what if the text was a fancy font, italic, and bold? This would also be difficult to read.

Imagine that you are a baseball coach, and you need to make decisions about players based on statistics such as the number of errors they've made or their batting averages. You ask the statisticians to compile the stats in a spreadsheet for you to look over. Would it be easy to read this spreadsheet?



You probably did not find this spreadsheet easy to read. The lack of color contrast between the text and the background makes it hard to read the labels and the players' names. Making some text bold would also help the reader. Now compare that spreadsheet to this one. Is this spreadsheet easier to read?



You probably think this spreadsheet is easier to read. The labels at the top of the column are easy to read because they are bold and the color choice is good. Alternating gray and white in the background makes it easier for the reader to follow across the row.

**In a spreadsheet, it is possible to make formatting changes, including changing the:**

- font;
- text style;
- text color;
- background color;
- borders;
- alignment;
- add dollar signs or percent symbols.

It is also possible to change the format of a date. The date could appear as 1/2/09 or as January 2, 2009. You may also decide how many digits should appear after the decimal. For example, you may want two numbers after the decimal (93.23) or you may want five numbers after the decimal (93.23412).

Follow these guidelines when changing the format to keep it professional and easy to read.

- Use a font, size, and **style** that is easy to read.
- Make important text stand out with underlining or bold text.
- Use consistent fonts and styles.
- Use colors that have high contrast such as dark blue on light yellow, or dark green on white.
- Separate groups of data with borders or shading.
- Make sure there is plenty of white space or open space around text.
- Use borders or alternate background colors to make it easier to follow across a row of data.

Now let's take a look at how you make these formatting changes.

Most spreadsheets allow you to change the way the text looks by selecting commands from the menu or by clicking on **icons** at the top of the screen. Before you can make any changes, you will first need to select the cell or group of cells. If you want to change one cell, simply click on that cell to make it active. You may want to select or highlight more than one cell. Highlighting in a spreadsheet is very similar to highlighting text in a word processor. Start in the upper left corner and drag down to the bottom right corner. The cell in the upper left corner will look active (white with a darker border) and the other cells will appear highlighted or a different color. If you want to highlight a whole row, click on the number at the left of that row. If you want to highlight an entire column, click on the letter at the top.

You can learn more about specific types of formatting by viewing the tutorial below.



Please refer to the media CD to complete Formatting a Spreadsheet.



### Your Turn

Let's make some changes to the format of your own spreadsheet. Enter the following data into a spreadsheet.

1. In cell A1, enter **Friends' Phone Numbers** and press Enter
2. Highlight A1 thru E1 and use the command "merge and center."



### True or False

- 1.7 True/False Changing the format of a spreadsheet always makes it easier to read.



### Multiple Select

- 1.8 Select all the guidelines you should follow when changing the format of a spreadsheet.

- A. Use a font, size, and style that is easy to read.
- B. Make important text stand out with underlining or bold text.
- C. Use many different fonts and styles.
- D. Use colors that have high contrast.
- E. Separate groups of data with borders or shading.
- F. Make sure there is plenty of white space or open space around text..

3. In cells A3 thru A6, enter four of your friends' names
4. In cells B3 thru B6, enter your friends' phone numbers.
5. Change the font of all the text.
6. Make "Friends' Phone Numbers" bold and dark blue.
7. Make the background of every other row light yellow.
8. Create a border around cells A1 thru E7.



After you save the spreadsheet, refer to the sample on the media CD to see what your spreadsheet should look like.

## Lets Review!

In this lesson, you were presented with ways to change the format of a spreadsheet. You learned how to change the font, size, and style of the text. In addition, you learned how to change the alignment, add borders, and add a background color. Applying autoformat will save you time in making a spreadsheet appear professional and easy-to-read.

 **Multiple Choice**

- 1.9 Sarah wants to place a title at the top of a spreadsheet at the middle. Sarah should \_\_\_\_.
- A. change the alignment to right
  - B. center the text in cell A1
  - C. type the title, select the cells running across the top of the spreadsheet, and use the merge and center command
  - D. click in cell Z10, type the title, and center the text inside the cell
- 1.10 Sam needs to create a spreadsheet for his coworkers. They will need to follow across a long row of data. Sam would like to make his spreadsheet easy to read. Sam should \_\_\_\_.
- A. make some formatting changes such as adding a fill color to every other row
  - B. change the text color to light green and change the fill color to red
  - C. highlight the cells
  - D. leave the spreadsheet without any format changes

 **Paragraph**

1.11 In 2–3 sentences, describe how you would change the background of a group of cells.

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 Teacher Check: \_\_\_\_\_ Initial \_\_\_\_\_ Date \_\_\_\_\_



# Editing Data

Imagine that you just finished entering rows and rows of data, and a coworker informs you that there have been some changes to the original data. You will now need to make the changes to your spreadsheet. Fortunately, spreadsheet software makes it easy to introduce these changes. When you make changes or corrections to the spreadsheet, you are editing data.

## Objectives:

- Move data.
- Insert a row or column.
- Make a column wider.
- Clear format and data.

In an earlier lesson, you corrected mistakes to a label in a single cell. You may also need to make corrections that are a little more complex. Suppose you have created a spreadsheet to track your car payments, and you listed the months of the year across the top. You look back and you notice that you have forgotten to list July. It is not necessary to retype all the months. You may simply add a column and type July. Or suppose you have entered a number into cell D14 and it should actually appear in cell D15. You may simply drag the contents of cell D14 to cell D15.

Some of the time-saving editing features in a spreadsheet are:

- moving data;
- inserting a column or row;
- deleting a column or row;
- making a column wider;
- clearing the format;
- clearing the data.

## Moving Data

Alyssa has mistakenly entered the data for column B into column A. At first, she got frustrated and thought that she needed to start the spreadsheet over again. This would take her at least thirty minutes. Then she remembered that she can move data. She highlights the data and moves the data into column B.

You can move the contents of one cell or you can move the contents of one row or one column. You may even move the contents of several rows or columns. Follow these steps when moving data.

1. Highlight the desired cell or cells.
2. Click and drag to the new location.

Watch the following demonstration.



Please refer to the media CD to complete [Moving Data](#).



## Your Turn

Take a few minutes to practice moving data in a spreadsheet. Since this is just for practice, you may enter any data in the spreadsheet.

## Inserting Columns or Rows

Andrew thought he was completely finished with a spreadsheet that represented the company's budget. His manager stops by his desk and asks him to add an entire category of expenses. This list of expenses should go between column D and column E in the current spreadsheet. Fortunately for Andrew, he remembers that it is possible to insert a column between column D and column E. When the new column is inserted, the current contents in column E will move to column F, making room for a blank column in column E.

To insert a column, click on any cell to the right of where you want the new column to appear. Then give the command for inserting a column. Typically you will find this command in the menu. The new column will appear to the left of the active cell. Some spreadsheet software also allows you to right click on the column header such as E to insert a new column.

The steps for inserting a row are very similar. First, click on any cell just below where you want the new row to appear. Then give the command for inserting a row. The new row will appear just above the active cell.



Please refer to the media CD to complete Inserting Rows and Columns.



**Your Turn**

Let's take a few minutes to practice inserting columns and rows. Enter any data into a spreadsheet or use any spreadsheet you have already created. Insert a column and a row. Then highlight two rows and give the command to insert rows. What happens? Two rows appear instead of one. Now highlight four columns and give the command to insert columns. What happens? Four columns should appear. After you have practiced enough to feel comfortable with the insert command, move to the next section.

## Deleting Columns and Rows

Suppose you inserted two columns when you really only needed one more column. Can you just as easily delete a column? Yes. Just highlight or select the column by clicking on the column header and use the delete command found in the menu. You may also delete several rows and several columns at one time. Watch this demonstration.

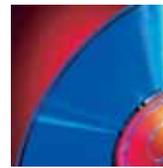


Please refer to the media CD to complete Deleting Rows and Columns.

## Making a Column Wider

As you have seen, sometimes columns are not wide enough for the label that you enter and this causes a word to get cut off. Or you may have seen ##### appear in a cell. This indicates that the number is too wide for the cell, and the column needs to be widened in order to read the number. It is very simple to make a column wider. There is a line that appears between the column headers or between the A and the B at the top of the column. When you bring your mouse up to this line, it becomes a two-sided arrow. Simply click and drag on this line to make the column wider or narrower. Although it is not very common, you may also want to make a row taller or shorter. Use the same method to do this. And you may double-click on this line to automatically resize the column or row to fit the longest label or number.

In addition, you may want to make all of the columns in your spreadsheet or in a section of your spreadsheet a uniform width. To do this, highlight the desired columns and use the command from the menu to format the column width. Watch the following demonstration.



Please refer to the media CD to complete Formatting Rows and Columns.



**Your Turn**

Let's take a few minutes to practice changing the width of columns and rows. Use a new spreadsheet or open a spreadsheet you have already created. When you feel comfortable with changing the width, move on to the next section.

## Clearing Format and Data

Suppose your coworker made changes to the format of a spreadsheet, and you are finding it difficult to read. You can simply clear the format to change it to a plain spreadsheet. It is possible to clear the format of one cell or an entire spreadsheet. Just highlight the desired cells and use a command found in the menu. This command varies in different spreadsheet software. The command may be "Clear format", "Default Formatting", or something similar. Watch the following demonstration.



Please refer to the media CD to complete Clearing Format.

Suppose you have created a spreadsheet and you want to create another similar spreadsheet. You want the labels to remain the same but you would like to delete other data. You simply highlight the area you would like to clear and use the clear command found in the menu. Proceed with creating your new spreadsheet. When saving it, make sure you save the new spreadsheet with a new name. Watch this demonstration.



Please refer to the media CD to complete Clearing Data.



## Your Turn

Take a few minutes to practice clearing formatting and clearing data.

## Lets Review!

In this lesson, you were given time-saving techniques for quickly editing data. The features discussed in this lesson included widening a column, moving data, clearing data and format, and inserting rows and columns.



## True or False

1.12 True/False In a spreadsheet, there are many features that help you edit quickly.



## Multiple Choice

1.13 Zach would like to reuse a spreadsheet that he created last year. However, he will need to delete the contents of several cells. Zach should \_\_\_\_\_.

- A. use his arrow to move to each of these cells and press Delete
- B. highlight the desired cells and use the clear command
- C. start a new spreadsheet from scratch
- D. click on each cell and press space bar

1.14 The steps for moving data from one cell to another are \_\_\_\_\_.

- A. place your mouse over the middle of a cell and drag it to a new cell
- B. select a cell and use the clear command
- C. select the cell and drag to the new cell
- D. highlight the cell, move your cursor while pressing shift

1.15 Eddie would like to add two new columns between column A and column B. Eddie should \_\_\_\_\_.

- A. select cell A2 and use the insert command
- B. select cell B2 and use the insert command
- C. highlight column A and column B and use the insert command
- D. highlight column B and column C and use the insert command



# Shortcuts

Have you ever taken a certain route only to find out later that there was a quicker route or a shortcut? Computer shortcuts work much the same way. Instead of taking three steps to complete a task, you can use one simple step or a shortcut. Or instead of moving your mouse up to the menu, dragging down to a command, and clicking OK, you may simply press two keys at the same time.

## Objectives:

- Use shortcuts to perform spreadsheet tasks quickly.
- Copy and paste.
- Use a template to create an invoice.

## Vocabulary:

**invoice** - a statement you submit to receive payment for a product or service.

**template** - a file that serves as a starting point for a new document.

Spreadsheets are wonderful at eliminating repetitive work. You have already observed how spreadsheets can save you time. Spreadsheets also come with some built in shortcuts. Some of these shortcuts are specifically for the software you are using. Have you ever noticed when you select a command from the menu, there are names of keys at the far right side of the menu list? These are shortcuts. Let's take a look at some.

Open a blank spreadsheet and hold your mouse over one of the menus. The File menu is a good example. Do you see some shortcuts? In most software, you will see "Ctrl+P" next to the print command. This simply means that to print, you may quickly press the Ctrl key and P at the same time. Using this shortcut and others like it will save you some time. As we move through this lesson, try out these shortcuts.

There are many shortcuts. You can use a shortcut to enter the current date. Or use a shortcut to move around in a very large spreadsheet. It could take a while to scroll through a large amount of data and using these shortcuts to move around will save you time.

Press the **Home** key to move to the beginning of the row

Press the **Ctrl** and **Home** key to move to the beginning of the spreadsheet

Press the **Ctrl** and **End** key to move to the last cell on the spreadsheet

## Autofill

Other shortcuts are mouse-driven and will make entering data quicker. A widely used spreadsheet shortcut is autofill. Let's take a look at how this shortcut will save you time.

Autofill will copy a number or label and fill it into other cells. For example, if you type "900" in cell A1 but would also like "900" to appear in cells A2 through A15, you can make one simple move with your mouse and the number will appear in all of those cells.

Hector is an owner of an apartment building. He would like to calculate the incoming rent for the next six months. The tenants in apartment G pay \$900 per month. Hector could type \$900 in six different cells or he can use a shortcut. He decides to be efficient and enters \$900 in the first cell. He moves the mouse to the bottom right corner of the cell and his cursor turns into a cross without arrows. He then drags his mouse down the next five cells. Now, \$900 appears in each of the cells. Watch the following demonstration.



Please refer to the media CD to complete [AutoFill Part 1](#).

Most spreadsheets have a feature that automatically inserts a series of numbers, dates, days, or months. For example, to place the months of the year across the top of a spreadsheet, type "January" in the first column and

when you autofill the rest of the months appear.

For Hector's spreadsheet, he would like the months January through June in cells A4 through A9. To use the shortcut, he types January in cell A4 and presses the Tab key. He then clicks on the January cell, clicks on the cell tab on the bottom right corner and drags down to cell A9. The months appear in the cells. Watch the following demonstration.



Please refer to the media CD to complete AutoFill Part 2.

This method also works for other patterns. For example, if you are working with a series of product identification numbers such as 111-123, 111-124, and so on, you can use it to save time. Follow these steps:

- Type the first two numbers in the series.
- Highlight both cells.
- Place your mouse [ARROW] over the cell tab on the bottom corner. (The cursor will change to a cross.)
- Click and drag your mouse the desired direction.



Let's take a few minutes to practice the autofill command. Create a spreadsheet that looks like the one below. Be sure to use the autofill command.

	A	B	C	D	E	F	G
1							
2							
3		Apartment A	Apartment B	Apartment C	Apartment D		
4	January	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
5	February	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
6	March	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
7	April	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
8	May	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
9	June	\$1,900.00	\$1,500.00	\$2,100.00	\$900.00		
10							

## Copy and Paste

Copying and pasting text or data will save you time. You can copy something you have in one place and put it in another place. You simply select the data you want to copy, use the copy command, click in the new location, and use the paste command. This is very useful when you want to copy labels, data, or formulas. Watch the following demonstration.



Please refer to the media CD to complete Copy and Paste.



As you see, you may paste over and over after you copy. Take a few minutes to practice copying and pasting. Try using the keyboard shortcuts also. The keyboard shortcuts are typically Ctrl+C to copy and Ctrl+V to paste.

## Templates

Templates will also save you some time. A template is a spreadsheet that has been created for a specific purpose and already includes some labels and formatting. You simply add data to the template and change labels as necessary. There are templates for many different purposes. For example, if you would like to track the hours you have worked, you could start with a template for a timesheet. Or if you wanted to track the performance of stocks that you own, you could start with a template for stock performance and enter in your own information. If you needed to submit a statement to a customer for payment for the items they ordered, you could start with an **invoice** template. Here is an example of an invoice template.

T&S Furniture		INVOICE	
1	Street Address	DATE:	September 29, 2008
2	City, ST ZIP Code	INVOICE #	100
3	Phone 405.555.0190 Fax 405.555.0191	FOR:	Project or service description
4			
5	Bill To:		
6	Name		
7	Company Name		
8	Street Address		
9	City, ST ZIP Code		
10	Phone		
11			
12			
13	DESCRIPTION	AMOUNT	
14			
15			
16		TOTAL	\$
17			
18	Make all checks payable to <b>Your Company Name</b>		
19	If you have any questions concerning this invoice, contact Name, Phone Number, E-mail		

When using a template like this, click on a cell with generic text, type your information, and press enter. At times, it is necessary to clear information in cells. Just click on the cell and press delete or use the clear command.

Where would you find a template? Some templates come with spreadsheet software. When starting a new spreadsheet, you may see the option to start from a template. You can also purchase templates or download free templates from Internet sites.

## Lets Review!

In this lesson, you became more efficient at using a spreadsheet. You now know how to use several shortcuts, including autofill, to complete tasks faster. Templates and macros will also save you time. In the problem set, you'll see just how efficient you have become.



### True or False

- 1.17      **True/False**      Shortcuts will help you complete spreadsheet tasks more efficiently.



### Multiple Choice

- 1.18      Susan is creating a spreadsheet and she needs to enter the days of the week in column A. Susan should \_\_\_\_\_.
- A. enter Sunday in cell A1, Monday in cell A2, Tuesday in cell A3, Wednesday in cell A4, Thursday in cell A5, Friday in cell A6, and Saturday in cell A7
  - B. enter Sunday in cell A1, place her mouse over the bottom right corner, and drag down
  - C. enter Sunday in cell A1 and use the autofill command
  - D. enter Sunday in cell A1, highlight the cell, and use copy and paste command
- 1.19      Jeff needs to quickly create a timesheet so that the employees at his ice cream shop can submit the hours they work. To save time, Jeff should use a \_\_\_\_\_.
- A. macro
  - B. invoice
  - C. template
  - D. shortcut
- 1.20      If you want the same data to appear in cell A1, C1, E1, and F1 use \_\_\_\_\_.
- A. autofill
  - B. copy and paste
  - C. insert
  - D. a template

 Paragraph

1.21 In 1-2 sentences, describe some keyboard shortcuts you have used during this lesson to save you time.

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Teacher Check: \_\_\_\_\_ Initial \_\_\_\_\_ Date \_\_\_\_\_

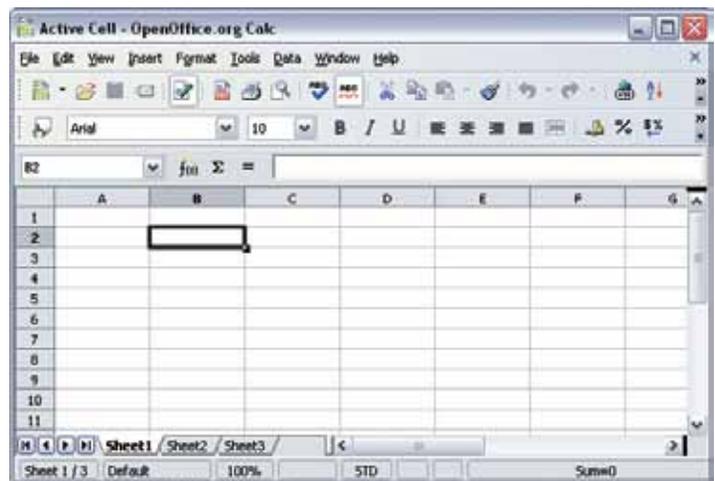


# Self Test 1: Spreadsheet Basics

## Multiple Choice

- 1.01 A cell is\_\_\_\_\_.
- A. a horizontal set of data in a spreadsheet
  - B. a tool for creating graphics
  - C. a box where a row and column intersect
  - D. software used to input, track, and calculate numbers

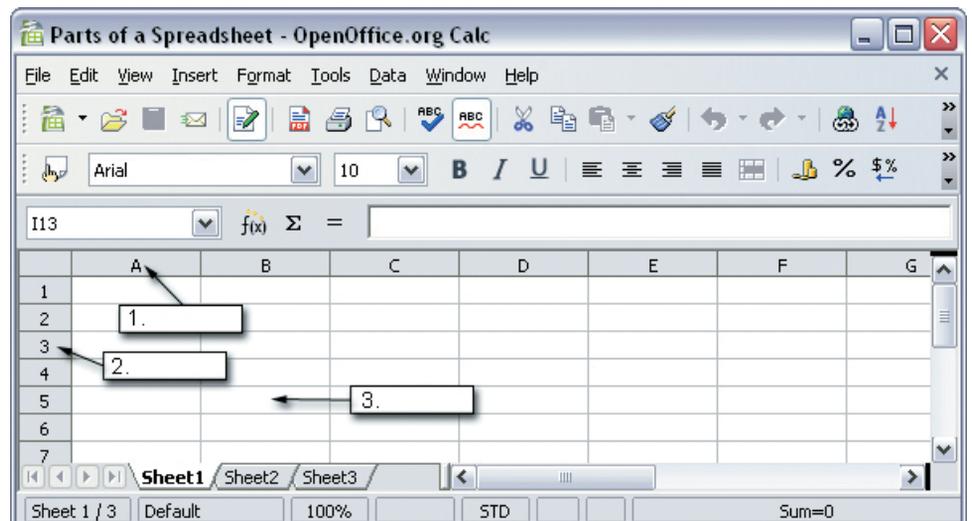
- 1.02 Which is the active cell in this spreadsheet? \_\_\_\_\_.
- A. B2
  - B. D2
  - C. C3
  - D. 2B



## Multiple Choice

- 1.03 Write the letter for the correct label in the numbered boxes of the spreadsheet.

- A. Cell B5
- B. Cell E5
- C. Column A
- D. Column D
- E. Column E
- F. Row 2
- G. Row 3



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- 1.04 Keith has data in cell A14 and he would like the cell to be empty. Keith should \_\_\_\_.
- A. double-click on cell A14 and type another number
  - B. use the arrow keys to move to cell A13 and press Enter or Return
  - C. use the mouse to click on cell A14 and press the space bar
  - D. use the mouse to click on cell A14 and press Delete
- 1.05 You are starting a spreadsheet, and you would like 500 to appear in cell C3. You should \_\_\_\_.
- A. type the number and drag it to cell C3
  - B. click on cell C3, type 500, and press Enter
  - C. click on cell A1, type 500, and press Enter
  - D. use the space bar to move to cell C3, enter 500, and press Enter
- 1.06 You have made a mistake when typing. You typed "Interest Rat" in cell A2. To fix this, you should \_\_\_\_.
- A. double-click on cell A2 and retype "Interest Rate"
  - B. click on cell A2 and press Tab
  - C. click on cell A2, press backspace, and type an "e"
  - D. double-click on cell A2, click after the "t" in "Rat," and type an "e"



### True or False

- 1.07 **True/False** When creating a spreadsheet, there's no need to worry about design and how it will be organized; the program will take care of that for you.



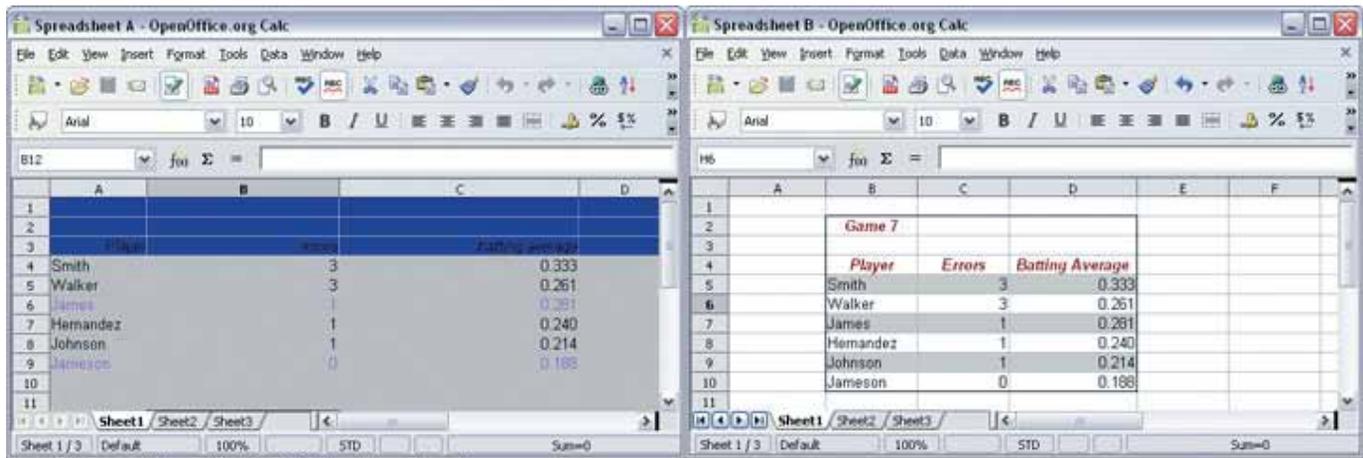
### Multiple Choice

- 1.08 Alicia would like to make important text in her spreadsheet stand out. Alicia should \_\_\_\_.
- A. use a fancy font
  - B. use underlining or bold text
  - C. use light green text on a yellow background
  - D. add some arrows to point to the cells

 **Multiple Select**

1.09 Compare the following two spreadsheets. Select the reasons why spreadsheet B is more readable than spreadsheet A. \_\_\_\_\_

- A. The style is easier to read.
- B. Important text stands out with bold text.
- C. It features many different fonts and styles.
- D. It uses colors that have high contrast.
- E. Groups of data are separated with borders or shading.
- F. There is plenty of white space or open space around text.



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**A**

**B**

 **Multiple Choice**

1.010 One of the labels in Sarah's spreadsheet does not fit inside cell A3. Sarah should \_\_\_\_\_.

- A. change the alignment to right
- B. center the text in cell A1
- C. make the column wider by dragging the line between the A and the B to the right
- D. double-click on the cell

1.011 Julie is working on a spreadsheet with data about the company's profits. They will be sharing this data with customers. She checks her e-mail and reads a memo that certain data should be kept confidential. She looks over her spreadsheet and sees that she needs to eliminate row 2 and row 3. Julie should \_\_\_\_\_.

- A. highlight row 2 and row 3 and use the delete command
- B. select B2 and press Delete
- C. highlight row 2 and use the clear command
- D. highlight row 2 and row 3 and make the background black

1.012 Susan is creating a spreadsheet, and she needs to enter the months of the year in column A. Susan should \_\_\_\_\_.

- A. enter January in cell A1, February in cell A2, March in cell A3, April in cell A4, May in cell A5, June in cell A6, and July in cell A7
- B. enter January in cell A1, place her mouse over the bottom right corner, and drag down
- C. enter January in cell A1 and press the Tab key
- D. enter January in cell A1, highlight the cell, and use copy and paste command

1.013 Jeff wants to print quickly so he presses the Ctrl and the P. Jeff used a \_\_\_\_\_.

- A. macro
- B. invoice
- C. template
- D. shortcut

 Paragraph

1.014 Ethan entered a long column of numbers into a spreadsheet and noticed that he accidentally entered the data into column D when it should have been in column E. In 2-3 sentences, describe what Ethan should do.

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 Paragraph

1.015 In 1–2 sentences, describe how you would create a border around a group of cells.

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