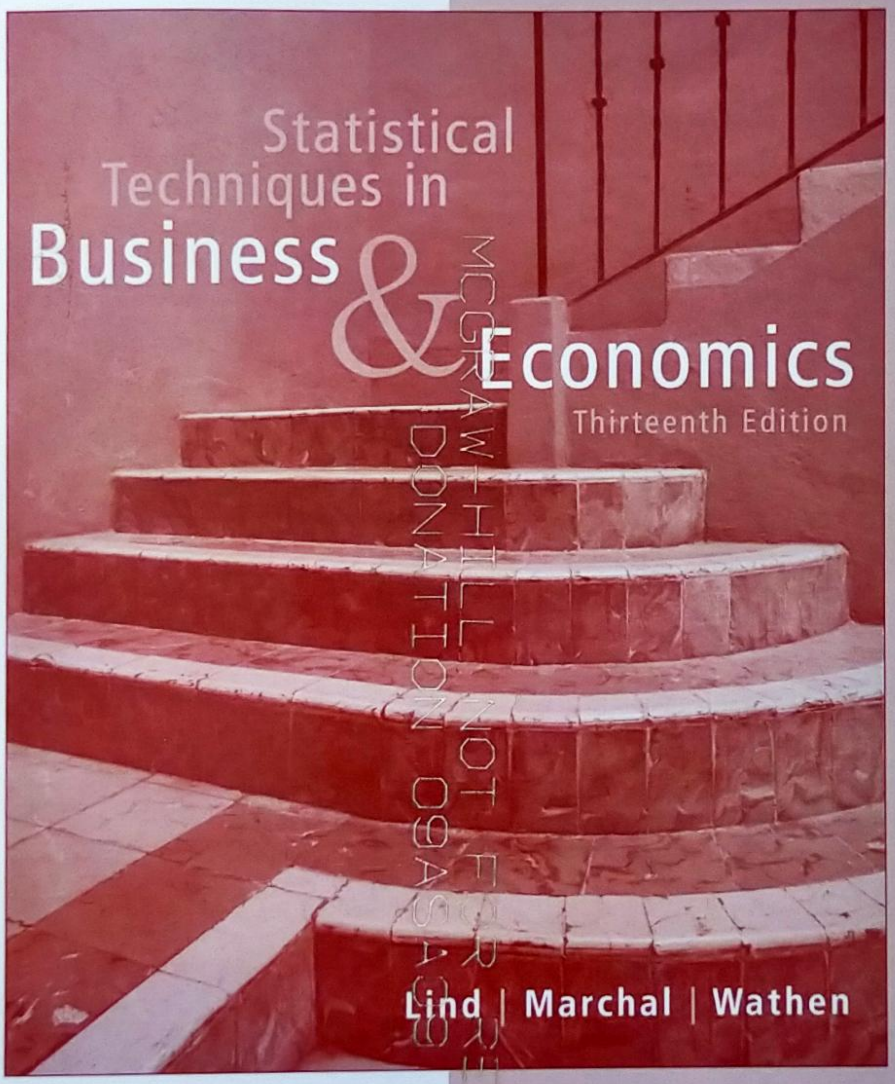
Basic Statistics Using Excel® for Office XP®

for use with



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Basic Statistics Using Excel® for Office XP®

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Statistical Techniques in Business & Economics

Thirteenth Edition

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PREFACE

Basic Statistics Using Excel for Office XP is a workbook, which empowers students to use the computer to help them understand and apply the basic tools taught in an introductory statistics course. When students use Excel to experiment and illustrate their problems, they can better visualize them and more easily see what happens.

Given the popularity of Excel and its expanded capacity to handle statistical data, it is a natural in colleges; in fact, many colleges have Excel on all of their computers. In addition, Excel is the software of choice in today's business world. What students learn with Excel can often be applied immediately on the job as well as in other classes. Many students have been exposed to this powerful software program and may already have it on their own computers.

This workbook is especially designed to accompany the Thirteenth Edition of **Statistical Techniques in Business and Economics** by Douglas A. Lind, William G. Marchal, and Samuel A. Wathen. It also works well with the Fifth Edition of **Basic Statistics for Business and Economics** by Lind, Marchal, and Wathen. Both of these books use Excel and Minitab illustrations. They sometimes use only Excel on problems where the authors feel Excel is superior and Minitab where they feel Minitab is superior. **This workbook fills a special niche for instructors who use only Excel in their courses**. It can also be used as a companion to most other introductory statistics texts, or by itself.

The chapter goals listed at the beginning of each chapter provides overviews of the main topics covered and the tasks students should be able to do after having worked through the chapter.

Following each chapter are several exercises to provide additional practice in applying the topics covered. Thus the students can check their comprehension of the material as they progress through each chapter. These exercises can also be used as class assignments.

The illustrations in this workbook are from Excel XP 2003; however, the material has been used successfully with previous versions of Excel. Excel XP is fully backwards compatible with Excel 2000. This means that you can open, edit, and save files between both versions (XP and 2000), without having to save them as a previous version.

If you are using Excel 2003, you should not have any problems using this workbook.

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CONTENTS

CHAPTER 1
USING MICROSOFT EXCEL SPREADSHEETS

CHAPTER GOALS

After completing this chapter, you will be able to:

1. Understand why Excel is so useful as a statistical tool.
2. Define what is meant by a spreadsheet.
3. Enter data into a spreadsheet.
4. Create formulas and solve problems with a worksheet.
5. Edit data that is in a spreadsheet.
6. Use a spreadsheet to experiment and illustrate.

Introduction

Welcome to **Basic Statistics Using Excel**.

Excel is the most popular spreadsheet program in the world and has the capacity to handle a wide variety of statistical applications. Most colleges have Excel on their campus computers; it is part of the Microsoft Office package. You may have already had some exposure to Excel and used it for other applications. You may even have Excel on your home computer.

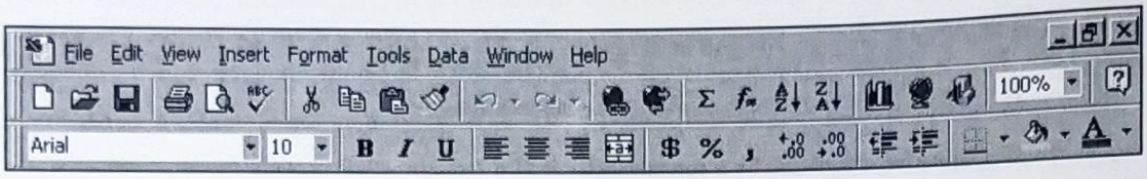
Using Excel will enhance your ability to understand and apply statistical principles. It is the software choice in the business world.

Basically, spreadsheets are used to help you with analysis of numerical data and to solve problems. In a spreadsheet, you can enter data that is related, and see what the results are if you change that data. You can create charts and graphs. You can run statistical analysis. Spreadsheets are used in businesses by managers to assist in decision making.

This chapter is for those who have never used a spreadsheet or worksheet, or for those who want a review of the basics.

Open Microsoft Excel. You may need to ask how the system you are using operates. A task pane opens on the right side of the worksheet window, providing you with document options: Open a workbook, New from existing workbook, and New from template. You may close the task pane to provide more workspace on your screen by selecting View, Task Pane from the Menu bar.

The first row of your Microsoft Excel worksheet is called the Menu bar. The second and third rows are called Tool bars. You will often be requested to select a button from either the Menu bar or the Tool bar.



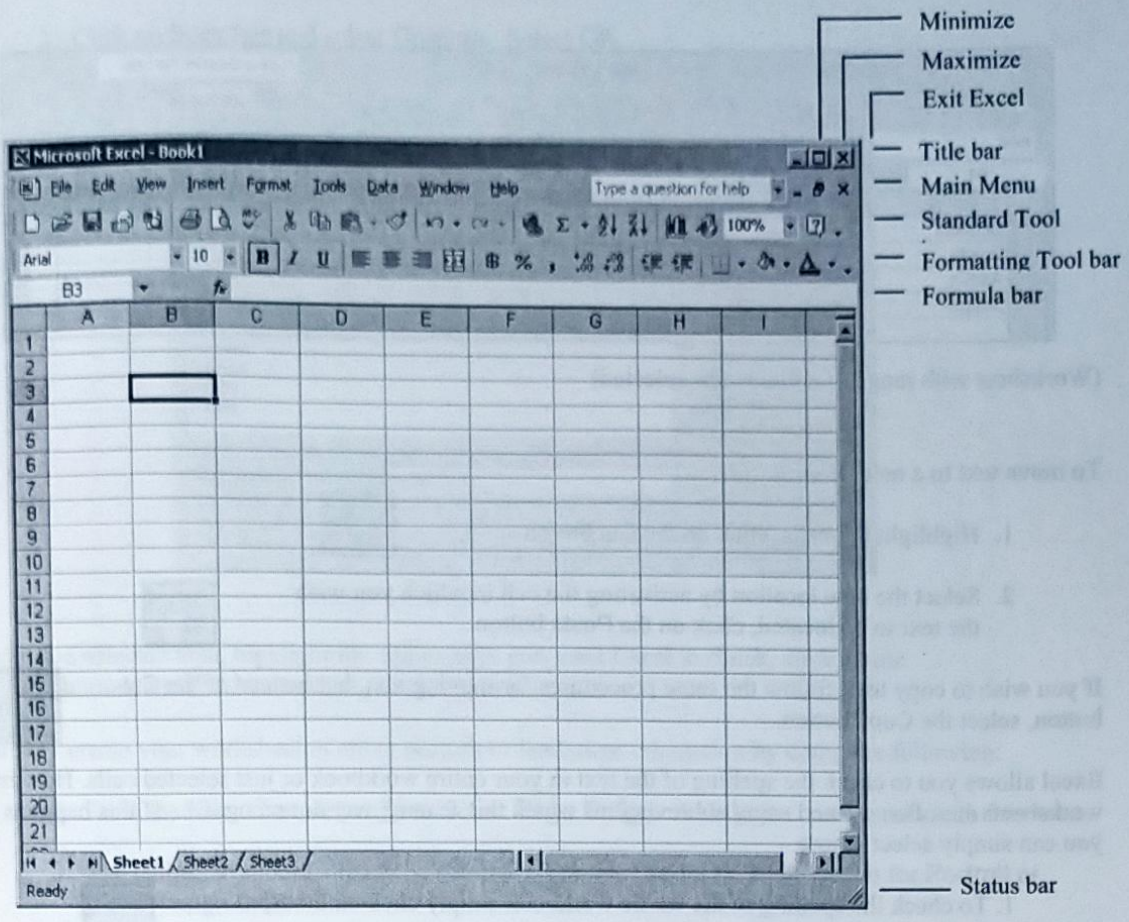
As your mouse pointer rests on each button of the Tool bar, a short description is displayed just below that button.

Creating a New Worksheet

If a blank worksheet does not appear, you will need to create a new worksheet.

To create a new worksheet select File, from the Menu bar. Select New. Or you may select the button for a new page.

The worksheet consists of rows, columns and cells. Each individual rectangle is a *cell*. Each cell is identified by it placement in the Column (A, B, C ...) and the Row (1, 2, 3 ...). Thus, the cell B3 would be in the 2nd column and the 3rd row. The mouse pointer in Excel looks like an open plus sign. When the pointer is on a cell, click the left mouse button and that cell becomes the active cell. The cell will have a dark bordered box around it. You can also use the arrow keys: up, down, right, left, to move around in the worksheet.



(Worksheet with cell B3 as active cell)

The data or information you key will show in the active cell and in the formula bar. When you press the <Enter> key, your data is entered into the cell and the cell immediately below becomes the active cell. Or you can point to another cell or use your arrow keys. To edit a cell, double click your mouse pointer in that cell, and the cell can be edited. The mouse pointer will show as a large I instead of an open plus. You may then edit the cell, without rekeying the entire contents.

You can select several cells at once to work with, called a range. A *range* is a rectangular group of cells. To use your mouse, you would place your mouse pointer on the upper left cell of the range to be highlighted, then click, hold and drag your mouse pointer to the lower right cell of the range, and then release the mouse button. The first cell shows a white background, all other cells in the selected range show a black background. A range is identified by its first and last cells with a colon in between.

1. Activate cell A1 by clicking on it, key **Schools** and press <Enter>.

2. Cell A2 should now be active. Key **Roads**. Key in the remaining data so that your worksheet looks like the one on the next page. Use the incorrect spelling of Supplie in cell A4.

If you make an error, you can correct it by immediately selecting Edit from the Menu bar, and selecting Undo, or you can simply click on the Undo button.