

# PREFACE

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Most business administration programs in Canadian colleges include an introductory course in business mathematics or mathematics of finance. *Business Mathematics in Canada* is intended for use in such courses. The text's primary objective is to support the learning of mathematics (other than statistics) needed to succeed in fields such as accounting, finance, management, marketing, and business information systems.

In the preparation of this edition, we have received extensive feedback from business mathematics instructors through surveys, focus groups, face-to-face meetings with faculty, and formal reviews. We have incorporated many of the suggestions in our continuing effort to make this text more motivating and helpful to students and more supportive to instructors.

The text may be adapted to either a one- or a two-semester course in business mathematics. Chapter and section headings preceded by an asterisk (\*) may be omitted without causing a loss of continuity or lack of preparation for later topics. The text is suitable for courses that emphasize either an algebraic approach or a preprogrammed financial calculator approach to compound interest problems. Both algebraic solutions and financial calculator solutions are presented in most Example Problems for compound-interest topics.



## NEW IN THE FIFTH EDITION

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This fifth edition contains many changes reflecting suggestions from users, focus groups, formal reviews by 37 college and institute instructors, and initiatives of the author and publisher.

**REORGANIZATION OF TOPICS** The location, sequence, and treatment of some topics have been changed.

- The topic *Solving Two Equations in Two Unknowns* (formerly Section 5.1 in the Fourth Edition) is now incorporated within Section 2.3 in the Fifth Edition. This consolidates in one section the algebraic procedures for solving a linear equation in one unknown and for solving two linear equations in two unknowns. Consistent with this change, word problems that may be solved by setting up two linear equations in two unknowns are now integrated within Section 2.4 (*Solving Word Problems*). In several of these problems, a student may now choose whether to develop a solution based either on two equations in two unknowns, or on a single equation in one unknown.
- Problems involving the repeated partitioning of a quantity (in Section 3.2 of the Fourth Edition) are now included in Section 2.4 of the Fifth Edition. We now take a more intuitive algebraic approach to solving them.
- The type of problem previously solved by *Converting Percent Differences to Proportions* (Section 3.3 of the Fourth Edition,) is now handled as an application of Percent Change in Section 2.5 in the Fifth Edition. Students should find this approach more straightforward.

- Each of the three approaches to *Cost-Volume-Profit Analysis* in Chapter 5 now has its own section in the Fifth Edition. This change yields three benefits. The former long and difficult Section 5.2 is now divided into shorter and more easily digested packages. Instructors and students can separate the three approaches more clearly. Any one or two of the three approaches may be omitted more neatly.
- Sections 14.1 and 14.2 have been reorganized and rewritten to achieve a more steady progression from less difficult to more difficult concepts. We now begin in Section 14.1 with *Amortization Schedules*. This will be a modest step for students who have previously covered Demand Loan Repayment Schedules in Section 7.4. It also builds a foundation for the less intuitive algebraic approach for the *Direct Calculation of the Interest and Principal Components of a Single Payment or Group of Payments* (now presented in Section 14.2.) Many of the problems in Exercises 14.1 and Exercise 14.2 have been rewritten for greater clarity.

**EXPANDED INSTRUCTION IN THE USE OF FINANCIAL CALCULATORS** With no sacrifice of the algebraic approaches for solving problems involving compound interest, the Fifth Edition provides more instruction in the use of financial calculators.

- Special-purpose financial-calculator functions:
  - After employing the calculator's basic financial functions in amortization computations early in Section 14.2, we now demonstrate the Texas Instruments BA-II PLUS's Amortization Worksheet. (Detailed instructions for this Amortization Worksheet are given in the new Appendix 14A. We present the amortization functions of the TI BA-35 and Sharp EL-733A calculators in the new Appendix 14B.)
  - Detailed instructions for the Texas Instruments BA-II PLUS's Bond Worksheet are provided in the new Appendix 15A.
  - Detailed instructions for the Texas Instruments BA-II PLUS's Cash Flow Worksheet are presented in Section 16.2 (for Net Present Value) and Section 16.4 (for Internal Rate of Return.)
- In addition to the usual algebraic solutions, the Student's Solutions Manual now includes financial calculator solutions to over 200 of the problems in Chapters 8 to 16.

**UPDATED TABLES AND PROBLEMS** Tables, Example Problems, and Exercise Problems incorporate the most recent data at the time of writing. The interest rates used in many examples and problems have been reduced to reflect the current low-interest-rate environment.

### **NEW TOPICS/EXPANDED COVERAGE**

- Chapter 16 is now in the main text instead of on the student CD-ROM.
- A new spreadsheet template for Section 2.6 (calculating income yield, capital gain yield, and rate of total return from securities) is included with the EXCEL Templates in Part I of the CD-ROM.
- The content formerly in Section 3.5 (*Exchange Rates and Currency Conversion*) of the Fourth Edition is now split between Sections 3.4 and 3.5. The more difficult topic of *Appreciation and Depreciation of Currencies* is now by itself in Section 3.5. In Section 3.4, we give additional attention to the Buy and Sell Exchange Rates faced in currency conversion.
- Our *Introduction to Graphical Techniques* (now Section 5.4) includes a new sub-section on the *Slope-Intercept Form of a Linear Equation*.
- Our coverage of *Strip Bonds* in Sections 8.5 and 9.2 is expanded. The new Tables 8.3 and 9.1 present real price and yield data for actual strip bonds.

## LEARNING SOLUTIONS

In addition to illustrating pertinent concepts and presenting up-to-date coverage, the author strives to present the material in a way that makes it coherent and easy to understand. The Fifth Edition of *Business Mathematics in Canada* retains and enhances the features that have been popular in earlier editions.

**MANY CANADIAN APPLICATIONS** Throughout the exposition, Example problems, Exercise problems, and Points of Interest, the book presents a wide range of applications of mathematics in Canadian business and finance. Every effort has been made to reflect current practices. Real financial instruments and real economic data are frequently used.

**WIDE SELECTION OF PROBLEMS** Each section of a chapter is followed by a set of problems for applying and reinforcing the new material. The text contains over 2000 problems and concept questions. A single bullet (•) next to a problem indicates “intermediate difficulty”; a double bullet (••) signifies “most challenging.” Considerable effort has been made to create problems that are instructive, practical, realistic, and interesting.

**TIPS AND TRAPS** Boxed elements inserted at appropriate points in the text draw the student’s attention to simplifications, pitfalls, shortcuts, calculator procedures, and common errors.

**POINT OF INTEREST VIGNETTES** Most chapters contain two or three intriguing illustrations of the application or misapplication of mathematics in business and personal finance. See the list of Point of Interest boxes on page xii.

### TIP

#### How to Succeed In Business Mathematics

Since various Business Mathematics and Mathematics of Finance courses start at different points in this text, this Tip appears at the beginning of each of the first four chapters. Part A on the CD-ROM discusses “How To Succeed in Business Mathematics.” If you have not done so already, you should carefully read Sections A.1 and A.2 as soon as possible.

### TRAP

#### Watch for Imprecise Language in “Everyday” Usage

In everyday usage, “trade discount” can refer to either the *percent* amount or the *dollar* amount of the discount. The intended meaning is sometimes obvious from the units quoted (% or \$). Where there is a possibility of confusion, we will use “*rate* of trade discount” or “*trade discount rate*” for the trade discount quoted as a percentage of the list price. The “*amount* of the trade discount” will refer to the trade discount measured in dollars. For example, if a trade discount *rate* of 35% applies to a \$200 list price item, the *amount* of the trade discount is  $0.35 (\$200) = \$70$ .



### POINT OF INTEREST

#### Misleading Price Representation

A few categories of consumer goods (expensive jewellery, for example) seem to be “ON SALE” so frequently or for so long that the consumer may wonder whether any significant volume of sales takes place at the “regular price.”

Price representations usually fall under Section 74.01 of the federal Competition Act. In layman’s terms, the section states that any materially misleading representation as to the price at which a product is ordinarily sold is prohibited. The courts have interpreted “ordinary price” to include words and phrases (such as “Compare to . . .” or “x% off”) used to imply that the comparison price is the price at which the product is ordinarily sold.

Section 74.01 states that the quoted or implied ordinary selling price should be one of the following:

- The price at which the product ordinarily sells in the market area.

- The advertiser’s own regular selling price, clearly identified by such words as “our regular price.”

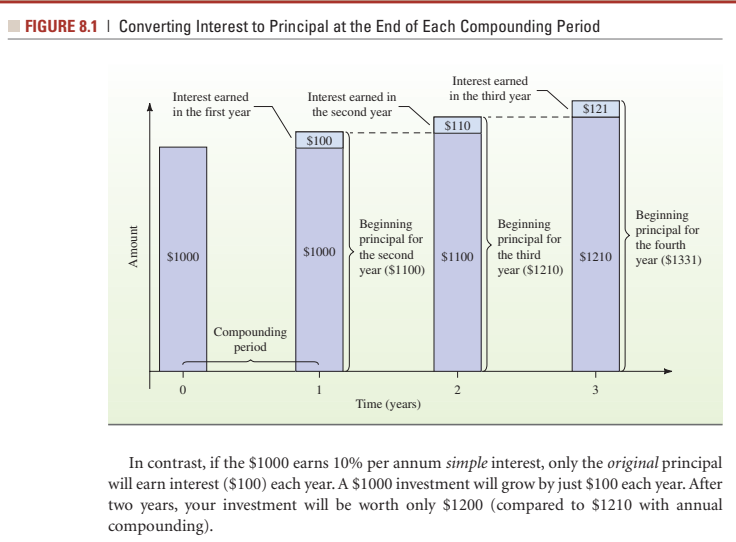
The comparison price should be sufficiently recent to have relevance. The “ordinary price” implied or quoted for comparison should be one at which the product has had significant sales, not merely a price at which it was offered for sale. The volume needed in order to be regarded as “significant” depends on the product and the market. However, the volume should have been large enough to justify a consumer believing that the markdown represented a genuine bargain or true savings. On the other hand, if the price of a product had been raised for a few weeks during which very few sales took place, then the merchant should not state or imply that the inflated price was the regular or ordinary selling price. Furthermore, the use of a “Manufacturer’s Suggested Retail Price” or “Suggested List Price” can constitute deceptive pricing if this price is not the product’s ordinary selling price.

**NET @SSETS BOXES** Each of these features provides a brief commentary about a Web site relevant to the topic under discussion. It may be a source of up-to-date data, a useful online calculator, or an interactive chart available on the text's Web site.

**NET@assets**

One-day-old currency exchange rates may be obtained in formats similar to Tables 3.1 and 3.2 through links on our Web site. Go to [www.mcgrawhill.ca/college/jerome/](http://www.mcgrawhill.ca/college/jerome/) and work your way to the page for the Student Centre. (This is a good page to bookmark since you will be referred to its resources frequently.) In the navigation bar select "Links in Textbook." After the page loads, look under Chapter 3 and click on the link named "Foreign Exchange Rates." You will obtain a version of Table 3.1 listing exchange rates per C\$ for each of the five most recent business days. For an updated version of Table 3.2, click on the link named "Cross Currency Rates."

**GRAPHS AND DIAGRAMS** This text makes more extensive use of graphs, diagrams, and interactive charts than other business mathematics texts.



**WORKED EXAMPLES** These examples provide detailed applications and illustrations of the text material in a step-by-step format.

**EXAMPLE 6.2B** | FLOATING INTEREST RATES

Lajos borrowed \$5000 on April 7 at prime + 1%. The prime rate was initially 5½%. It increased to 6% effective May 23, and 6¼% effective July 13. What amount was required to repay the loan on August 2?

**SOLUTION**

The statement that the interest rate "increased to 6% effective May 23" means that interest was charged for May 23 (and subsequent days) at the new 6% rate. We need to break the overall loan period into intervals within which the interest rate is constant.

In the following table, the beginning and ending dates have been given for each interval. Since we count the first day but not the last day in an interval, May 23 is counted only in the second interval and July 13 is counted only in the third interval. This is consistent with the new interest rates taking effect on May 23 and July 13.

Interval	Number of days	Interest rate	Interest (\$)
April 7 to May 23	24 + 22 = 46	5.5 + 1 = 6.5%	40.96 ①
May 23 to July 13	9 + 30 + 12 = 51	6.0 + 1 = 7.0%	48.90 ②
July 13 to August 2	19 + 1 = 20	6.25 + 1 = 7.25%	19.86
Total:			109.72

① Interest =  $Prt = \$5000(0.065)\frac{46}{365} = \$40.96$

② Interest =  $Prt = \$5000(0.07)\frac{51}{365} = \$48.90$

The amount required to repay the loan on August 7 was  $\$5000 + \$109.72 = \$5109.72$ .

**KEY FORMULAS** These are called out in the text, highlighted in coloured font, and identified by equation number. A Summary of Key Formulas is available at the inside front cover of the text, and a Formula Sheet can be found on the Jerome Online Learning Centre at [www.mcgrawhill.ca/college/jerome](http://www.mcgrawhill.ca/college/jerome).

**HIGHLIGHTED CONCEPTS**

Throughout the text, key concepts are pulled and highlighted in a box—signaling to students that this material is particularly relevant and critical to their understanding.

**Criterion for the Equivalence of Two Payment Streams**  
 A payment stream's equivalent value (at a focal date) is the sum of the equivalent values of all of its payments. Two payment streams are economically equivalent if they have the *same* equivalent value at the *same* focal date.

**CALCULATOR CALL-OUT BOXES**

Some compound-interest calculations may be performed using a calculator's financial functions. In our Example problems, we employ call-out boxes:

- 1) to provide a clear visual indication of the computations that may be performed using the financial functions;
- 2) to present the keystroke operations for carrying out the computations.

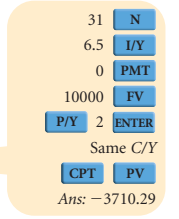
**EXAMPLE 8.5E | CALCULATING THE PRICE OF A STRIP BOND**

A \$10,000 face value strip bond has 15½ years remaining until maturity. If the prevailing market rate of return is 6.5% compounded semiannually, what is the fair market value of the strip bond?

**SOLUTION**  
 Given:  $FV = \$10,000$      $j = 6.5\%$      $m = 2$     Term = 15½ years  
 Therefore,  $i = \frac{j}{m} = \frac{6.5\%}{2} = 3.25\%$     and     $n = m(\text{Term}) = 2(15.5) = 31$

Fair market value = Present value of the face value  
 $= FV(1 + i)^{-n}$   
 $= \$10,000(1.0325)^{-31}$   
 $= \$3710.29$

The fair market value of the strip bond is \$3710.29.




**PROFESSIONAL PROBLEMS** Approximately 40 problems are taken from course materials of the **Canadian Institute of Financial Planning** and the **Institute of Canadian Bankers**. These are the two organizations most active in the delivery of financial planning courses in Canada. An icon in the adjacent margin flags these problems. The sample problems demonstrate that the topics covered in a business math course are important to these professional bodies. By solving these problems, students also gain confidence in their ability to succeed in industry-specific professional courses.

**CONCEPT QUESTIONS** Concept Questions are presented at the end of many sections. These questions exercise students' intuition, and test their understanding of concepts, principles, and relationships among variables.



**EXCEL SPREADSHEET SOLUTION TEMPLATES** Students are provided with Excel Templates tied to specific problems in the text. Students gain experience solving problems with spreadsheets. Spreadsheet Templates are available on the Student CD-ROM included with this text or for download at the Student Online Learning Centre, [www.mcgrawhill.ca/college/jerome](http://www.mcgrawhill.ca/college/jerome).



**CASES** Seven chapters include a case study in the end-of-chapter material. See the List of Cases on page xiii.

C A S E

■ Mountains of Money ■

One of the oldest and largest mutual funds in Canada is the Templeton Growth Fund, Ltd. Shares in the fund were first sold at the end of November 1954. A common graphic for dramatically illustrating the long-term performance of a mutual fund is known as a “mountain chart.” The vertical scale of the chart is a logarithmic scale. On a logarithmic scale, each doubling of the investment produces the same interval on the vertical scale.

The time axis covers 49 years (from November 29, 1954 to November 30, 2003). The chart indicates that an investment of \$10,000 at the end of November 1954 was worth \$4,998,067 on November 30, 2003. (This outcome assumes that all dividends paid on shares of the fund were reinvested in additional shares.)

**WWW.EXERCISE.COM** Nine chapters conclude with one or more optional Web-based activities. Typically, an activity is based on a Web site previously mentioned in a NET @ssets box.

WWW.EXERCISE.COM

**1. Searching a Mutual Fund Data Base** Follow the instructions in the NET @ssets box in Section 9.1 to locate the “Mutual Funds” link on this text’s Web site. After you bring up this Web page, select the “Fund Selector” Tool. One of your options will be to enter the name of a particular fund. Enter “PH&N Canadian Equity Fund” and click on “Go.” The table that loads has several tabs along its top. Select “Long-

term.” This brings up a table with columns giving the fund’s compound annual return for 3-year, 5-year, and 10-year periods ending at the end of the previous month. How much would \$10,000 invested in this fund 10 years ago be worth today? Repeat for the Investors Canadian Equity Fund and the Templeton Growth Fund Ltd.

**GLOSSARY** The Fifth Edition has a full glossary near the end of the text.

**END-OF-CHAPTER PROBLEMS** Students’ learning and understanding of the chapter content is further supported by a set of Review Problems and Self-Test Exercises that conclude each chapter.

**ALWAYS CURRENT URL LINKS** When the Fifth Edition refers the reader to a Web site, it provides the name of a hypertext link located on a special “Links in Textbook” page in the Student Centre of the textbook’s Web site. This will avoid the problem of obsolescence when actual URLs are cited in a text.

## TECHNOLOGY SOLUTIONS

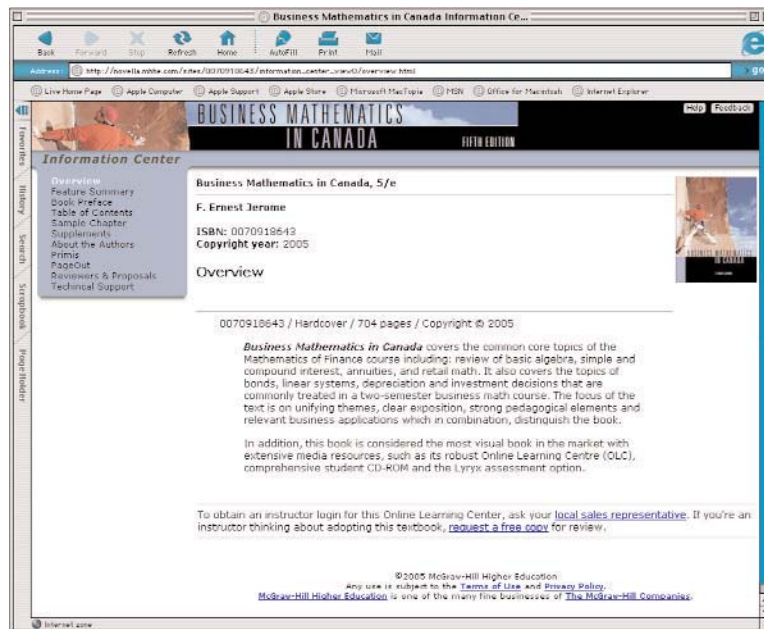


Online  
LearningCentre

### ONLINE LEARNING CENTRE

More and more students are studying online. That is why we offer an Online Learning Centre (OLC) that follows *Business Mathematics in Canada* chapter by chapter. You don't have to build or maintain anything, and it's ready to go the moment you and your students type in the URL:

[www.mcgrawhill.ca/college/jerome](http://www.mcgrawhill.ca/college/jerome)



As your students study, they can refer to the OLC website for such benefits as:

- Quiz Questions
- Additional Exercises
- Excel Spreadsheet Templates
- Web Links
- Internet Application Problems
- Interactive Charts
- Interactive Exercises
- Formula Sheet
- TI BA II PLUS Walkthrough
- Searchable Glossary
- Study to Go

Remember, the *Business Mathematics in Canada* OLC content is flexible enough to use with any course management platform currently available. If your department or school is already using a platform, we can help. For information on our course management services, contact your *i*-Learning Sales Specialist or see “Superior Service” on page xxiv.



## LYRYX ASSESSMENT BUSINESS MATHEMATICS [LABM]

Based on *Business Mathematics in Canada* by Ernie Jerome, LABM is a leading edge online assessment system, designed to support both students and instructors. The assessment takes the form of a homework assignment called a Lab. The assessments are algorithmically generated and automatically graded so that students get instant grades and feedback. New Labs are randomly generated each time, providing the student with unlimited opportunities to try a type of question. After they submit a Lab for marking, students receive extensive feedback on their work, thus promoting their learning experience.

**FOR THE INSTRUCTORS:** The goal of the product is for instructors to use these Labs for course marks instead of creating and marking their own labs, saving instructors and teaching assistants valuable time to instead help students directly. After registering their courses with us, instructors can create labs of their choice by selecting problems from our test bank, and set a deadline for each one of these Labs. The content, marking and feedback of the problems has been developed and implemented with the help of experienced instructors in business mathematics. Instructors have access to all their students' marks and can view their best Labs. At any time, the instructors can download the class grades for their own programs.

**FOR THE STUDENT:** LABM offers algorithmically generated and automatically graded assignments. Students get instant grades and instant feedback—no need to wait until the next class to find out how well they did! Grades are instantly recorded in a grade book that the student can view.

Students are motivated to do their Labs for two reasons: first because it can be tied to assessment, and second, because they can try the Lab as many times as they wish prior to the due date with only their best grade being recorded.

Instructors know from experience that if students are doing their business math homework, they will be successful in the course. Recent research regarding the use of Lyryx has shown that when Labs are tied to assessment, even if worth only a small percentage of the total grade for the course, students WILL do their homework—and MORE THAN ONCE!!

Please contact your *i*-Learning Sales Specialist for additional information on the Lyryx Assessment Business Math system.

Visit <http://labm.lyryx.com>

The screenshot shows a web browser window displaying the Lyryx Assessment Business Mathematics website. The page has a dark sidebar with navigation links: Logon, Introduction, Registration, System Requirements, Security, Contacts, Demo, and Help. The main content area features the Lyryx Assessment Business Mathematics title and an introduction. Below the introduction, there is a section for students with a question: "Question 1 [5 points] Calculate the missing value. For full marks, round dollar amounts to the nearest cent." The question includes a table with columns for Initial Value (V<sub>1</sub>), Final Value (V<sub>2</sub>), and Percent Change (c). The values shown are 0.00, \$98.60, and -27.98% respectively. Below the table, there is a marking section that provides the correct answer (\$136.91) and the formula for Percent Change:  $\text{Percent Change} = \frac{\text{Final Value} - \text{Initial Value}}{\text{Initial Value}} \times 100\%$  and the formula to obtain V:  $V = V_1 / (1 + c)$ .



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- **CPS** helps you to increase **student preparation, interactivity and active learning** so you can receive immediate feedback and know what students understand.
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- With **CPS** you can create lecture questions that can be multiple-choice, true/false and subjective. You can even create questions on-the-fly as well as conduct group activities.
- **CPS** not only allows you to **evaluate classroom attendance, activity, and grading** for your course as a whole, but CPS Online allows you to provide students with an immediate study guide. All results and scores can easily be imported into Excel and can be used with various classroom management systems.

CPS ready content is available for use with Jerome, *Business Mathematics in Canada*. Please contact your *i*-Learning Sales Specialist for more information on how you can integrate CPS into your business math classroom.

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**PAGEOUT** McGraw-Hill Ryerson's course management system, PageOut, is the easiest way to create a website for your business mathematics course. There is no need for HTML coding, graphic design, or a thick how-to book. Just fill in a series of boxes in plain English and click on one of our professional designs. In no time, your course is online!

For the integrated instructor, we offer *Business Mathematics in Canada* content for complete online courses. Whatever your needs, you can customize the *Business Mathematics in Canada* Online Learning Centre content and author your own online course materials. It is entirely up to you. You can offer online discussion and message boards that will complement your office hours, and reduce the lines outside your door.

Content cartridges are also available for course management systems, such as **WebCT** and **Blackboard**. Ask your *i*-Learning Sales Specialist for details.



## SUPERIOR SERVICE

**SUPERIOR SERVICE** Service takes on a whole new meaning with McGraw-Hill Ryerson and *Business Mathematics in Canada*. More than just bringing you the textbook, we have consistently raised the bar in terms of innovation and educational research—both in mathematics and in education in general. These investments in learning and the education community have helped us to understand the needs of students and educators across the country, and allowed us to foster the growth of truly innovative, integrated learning.



**INTEGRATED LEARNING** Your Integrated Learning Sales Specialist is a McGraw-Hill Ryerson representative who has the experience, product knowledge, training, and support to help you assess and integrate any of our products, technology, and services into your course for optimum teaching and learning performance. Whether it's using our test bank software, helping your students improve their grades, or putting your entire course online, your *i-Learning* Sales Specialist is there to help you do it. Contact your *i-Learning* Sales Specialist today to learn how to maximize all of McGraw-Hill Ryerson's resources!



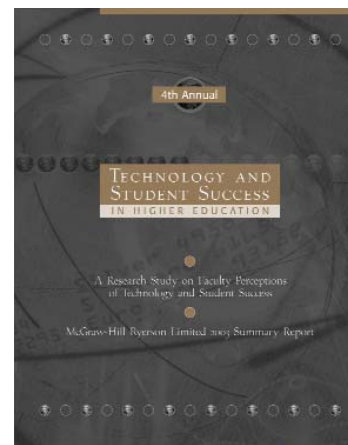
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**TEACHING, TECHNOLOGY & LEARNING CONFERENCE SERIES** The educational environment has changed tremendously in recent years, and McGraw-Hill Ryerson continues to be committed to helping you acquire the skills you need to succeed in this new milieu. Our innovative Teaching, Technology & Learning Conference Series brings faculty together from across Canada with 3M Teaching Excellence award winners to share teaching and learning best practices in a collaborative and stimulating environment. Preconference workshops on general topics, such as teaching large classes and technology integration, will also be offered. We will also work with you at your own institution to customize workshops that best suit the needs of your faculty.

Visit [www.mcgrawhill.ca/highereducation](http://www.mcgrawhill.ca/highereducation) for an up-to-date listing of events.

**RESEARCH REPORTS INTO MOBILE LEARNING AND STUDENT SUCCESS** These landmark reports, undertaken in conjunction with academic and private sector advisory boards, are the result of research studies into the challenges professors face in helping students succeed and the opportunities that new technology presents to improve teaching and learning.



## COMPREHENSIVE TEACHING AND LEARNING PACKAGE

### FOR THE STUDENT

#### Student's Solutions Manual 0-07-092174-1

Prepared by the text author, the Student Solutions Manual (SSM) contains full solutions to all odd-numbered problems and Concept Questions, and to all problems in Self-Test exercises. In addition to Algebraic Solutions, the SSM now includes financial calculator solutions to relevant problems in Chapters 8 to 16. Ask for it at your bookstore today.

#### STUDENT ONLINE LEARNING CENTRE

The Student OLC at

[www.mcgrawhill.ca/college/jerome](http://www.mcgrawhill.ca/college/jerome)



includes the following features and resources:

- Automatically-marked multiple-choice **Quiz Questions**
- **Internet Application Problems**
- **Web Links** to relevant sites
- **Additional Material** (Downloadable supplemental content and Excel spreadsheet templates.)
- **Interactive Charts** (allowing a student to change one or more input variables and immediately observe the effect on the chart)
- Searchable **Glossary**
- **Interactive Exercises** for selected chapters
- **Additional Exercises** (250 extra confidence-building problems.)
- **Improve Your Grades** (Learning strategies for succeeding in Business Mathematics.)
- Links in textbook
- **Link to Lyryx**
- **Formula Sheet**
- **TI BA II PLUS Walkthrough**
- **Study To Go**

**STUDENT CD-ROM** Included with each new copy of the text, the CD-ROM contains the following supplementary material.

- A guide on “How to Succeed in Business Mathematics”
- Example problems solved using the Texas Instruments BA-35 and Sharp EL-733A financial calculators
- Additional content
- EXCEL Templates for spreadsheet solutions



## FOR THE INSTRUCTOR

**INSTRUCTOR'S ONLINE LEARNING CENTRE** The OLC includes a password protected Web site for instructors; visit us at:

**[www.mcgrawhill.ca/college/jerome](http://www.mcgrawhill.ca/college/jerome)**

The site offers downloadable supplements and access to PageOut, the McGraw-Hill Ryerson Web site development centre.

**INSTRUCTOR'S CD-ROM** This CD-ROM includes the following Instructor Supplements:

- **Instructor's Solutions Manual.** Prepared by the author and with a technical review by Jean-Paul Olivier, Red River College, the ISM contains full solutions to all the exercises and review problems, self-test exercises, and cases in the text. In addition to algebraic solutions, the ISM now includes financial calculator solutions to relevant problems in Chapters 8 to 16.
- **Computerized Test Bank.** This test bank contains both multiple-choice questions and word problems. This computerized testing package allows instructors to edit test items and add new questions to the text bank. Questions and problems may be selected by type, by section, by topic, by degree of difficulty, and by source.
- **PowerPoint® Presentation.** The Microsoft® PowerPoint® Presentation slides have been revised to better illustrate chapter concepts. It contains selected questions and solutions from the text. This package is available on the Instructor's CD or as a download from the Instructor's OLC.



## ACKNOWLEDGEMENTS

The Fifth Edition reflects the compound future value of contributions from many dedicated instructors over the previous and current editions. A new debt of gratitude is owed to the following educators for their participation in focus groups and/or review of the manuscript for the Fifth Edition. Their thoughtful suggestions and comments have made this edition a better text.

Samuel Boutilier	<i>University College of Cape Breton</i>
Ross Bryant	<i>Conestoga College</i>
Elisabeth Carter	<i>Douglas College</i>
Helen Catania	<i>Centennial College</i>
Glenn Charlesworth	<i>Lakeland College</i>
Baden Connolly	<i>Nova Scotia Community College</i>
Michael Conte	<i>Durham College</i>
Charles Cox	<i>St. Lawrence College</i>
Felix Ernst	<i>Camosun College</i>
Tom Fraser	<i>Niagara College</i>
Bruno Fullone	<i>George Brown College</i>
Frank Gruen	<i>British Columbia Institute of Technology</i>
Brian Hobson	<i>Georgian College</i>
David Howard	<i>Canadore College</i>
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