

TABLE OF CONTENTS

Finite Mathematics and Applied Calculus Part I

Chapter 1: REVIEW OF BASIC ALGEBRA

1.1	<i>Real Number System</i>	1-9
1.2	<i>Absolute Value</i>	10-16
1.3	<i>Polynomials and Factoring</i>	17-28
1.4	<i>Rational Expressions</i>	29-38
1.5	<i>Radical Expressions</i>	39-47
1.6	<i>Chapter Summary</i>	47-51
1.7	<i>Chapter Review</i>	52-53
1.8	<i>Chapter Test</i>	54-54

Chapter 2: LINEAR, QUADRATIC FUNCTIONS AND TECHNIQUES OF GRAPHING

2.1	<i>Equations of lines</i>	55-65
2.2	<i>Quadratic Function</i>	65-75
2.3	<i>Techinques of Graphing</i>	76-96
2.4	<i>Application of Linear Functions to Business and Economics</i>	97-103
2.5	<i>Application of Quadratic functions to Business and Economics</i>	104-106

Chapter 3: EXPONENTIAL AND LOGARITHMIC FUNCTIONS

3.1	<i>Exponential functions</i>	107-111
3.2	<i>Meaning of Logarithms</i>	112-117
3.3	<i>The Properties of Logarithmic Functions</i>	118-122
3.4	<i>Exponential Equations</i>	123-126
3.5	<i>Logarithmic Equations</i>	127-131
3.6	<i>Application of Exponential and Logarithmic Functions</i>	132-138
3.7	<i>Chapter Summary</i>	139-145
3.8	<i>Chapter Review</i>	145-147
3.9	<i>Chapter Test</i>	147-147

Chapter 4: MATHEMATICS OF FINANCE

4.1	<i>Review of Percents</i>	149-158
4.2	<i>Simple Interest and Discount Note</i>	159-166
4.3	<i>Compound Interest</i>	167-173
4.4	<i>Annuities</i>	174-179
4.5	<i>Present Value of an Annuity and Amortization</i>	180-197
4.6	<i>Chapter Summary</i>	198-200
4.7	<i>Chapter Review</i>	200-202
4.8	<i>Chapter Test</i>	203-203

CHAPTER 5: SYSTEM OF LINEAR EQUATIONS AND MATRICES

5.1	<i>System of Equations in Two Variables</i>	205-213
5.2	<i>System of Linear Equations in more than two variables</i>	214-224
5.3	<i>Matrix Algebra and its Applications</i>	225-249
5.4	<i>Gauss-Jordan Method of Solving a System of Linear Equations</i>	250-260
5.5	<i>Determinants and Solution of the System of Equations</i>	261-271
5.6	<i>Applications of Matrices</i>	272-277
5.7	<i>Technology for Matrix Calculation</i>	278-279

Chapter 6: LINEAR PROGRAMMING

6.1	<i>System of Linear Inequalities in Two Variables</i>	281-284
6.2	<i>Business Applications and Linear Models</i>	284-301
6.3	<i>The Simplex Method</i>	302-333
6.4	<i>Simplex method: Nonstandard Linear Programming Problems</i>	334-341
6.5	<i>Technology for Solving Linear Programming Problems-Microsoft Excel</i>	342-347
6.6	<i>Chapter Summary</i>	348-359
6.7	<i>Chapter Review</i>	359-364
6.8	<i>Chapter Test</i>	364-365

Chapter 7: BASIC STATISTICS

7.1	<i>Organizing Data</i>	367-372
7.2	<i>Measures of Central Tendency</i>	372-376
7.3	<i>Percentile Rank</i>	377-378
7.4	<i>Measures of Spread</i>	379-381

7.5	<i>Normal Curve</i>	382-386
7.6	<i>Probability (Chance)</i>	387-390
7.7	<i>Numerical Representation of Bivariate Data</i>	391-401
7.8	<i>Chapter Summary</i>	402-405
7.9	<i>Chapter Review</i>	406-407
7.10	<i>Chapter Test</i>	407-408

Chapter 8: LIMITS AND CONTINUITY

8.1	<i>Intuitive Approach</i>	409-409
8.2	<i>Limits (Numerical Approach)</i>	410-412
8.3	<i>Limits (Graphical Approach)</i>	413-416
8.4	<i>Limits (Algebraic Approach)</i>	417-426
8.5	<i>Limit as x Approaches Infinity</i>	427-435
8.6	<i>Continuous Functions</i>	435-441
8.7	<i>Theorems on Continuous Functions</i>	442-445
8.8	<i>Chapter Summary</i>	445-447
8.9	<i>Chapter Review</i>	447-448
8.10	<i>Chapter Test</i>	449-449

CHAPTER 9: THE DERIVATIVE

9.1	<i>Introduction</i>	451-461
9.2	<i>Derivative of a Function using the Limit Definition</i>	462-471
9.3	<i>Rules for Derivatives</i>	472-484
9.4	<i>Implicit Differentiation</i>	485-490
9.5	<i>Strategy for Differentiation</i>	490-493
9.6	<i>Linear Approximation and Differentials</i>	493-497
9.7	<i>Related Rates</i>	497-503
9.8	<i>Chapter Summary</i>	503-504
9.9	<i>Chapter Review</i>	504-505
9.10	<i>Chapter Test</i>	506-506
	<i>Answers</i>	A.1-A.22
