BRONX COMMUNITY COLLEGE LIBRARY
SUGGESTED FOR
MTH 06
BASIC CONCEPTS OF MATHEMATICS II

Authors: Baratto, Bergman, Hutchison

Section Topics of the Textbook

V3464.7 Chapter 7 Rational Expressions
9.1 Simplifying Rational Expressions
9.2 Multiplying and Dividing Rational Expressions
9.3 Adding and Subtracting Rational Expressions
9.4 Complex Fractions
9.6 Solving Rational Equations

V3464.3 Chapter 3 Graphs and Linear Equations

V3464.9 Chapter 9 Graphical Solutions

V3464.10 Chapter 10 Radicals and Exponents
7.1 Roots and Radicals
7.2 Simplifying Radical Expressions
7.3 Operations on Radical Expressions
7.4 Solving Radical Equations
7.5 Rational Exponents
7.6 Complex Numbers

V3464.11 Chapter 11 Quadratic Functions
8.1 Solving Quadratic Equations
8.2 The Quadratic Formula
8.3 An Introduction to Parabolas
8.4 Problem Solving with Quadratics

V3464.12 Chapter 12 Conic Sections

V3464.13 Chapter 13
Exponential and Logarithmic Functions
10.4 Exponential Functions
10.5 Logarithmic Functions
TRIGONOMETRY SUPPLEMENT

TRIGONOMETRY (SERIES) – Total Time: 414min, c1988

DVD770.1 - ANGLES, DEGREES, AND RADIANS
- INTRODUCTION TO TRIGONOMETRIC FUNCTIONS
- TRIGONOMETRIC FUNCTIONS OF GENERAL ANGLES
- TRIGONOMETRIC EQUATIONS

DVD770.2 - GRAPHING TRIGONOMETRIC FUNCTIONS – I
- GRAPHING TRIGONOMETRIC FUNCTIONS – II
- TRIGONOMETRIC IDENTITIES – I
- TRIGONOMETRIC IDENTITIES - II

DVD770.3 - TRIGONOMETRIC IDENTITIES - III
- INVERSE TRIGONOMETRIC FUNCTIONS
- TRIGONOMETRIC EQUATIONS
- RIGHT TRIANGLE APPLICATIONS

DVD770.4 - LAW OF SINES
- LAW OF COSINES
- POLAR COORDINATES
- TRIGONOMETRIC FORM: DEMOIVRE’S THEOREM & ROOTS OF COMPLEX NUMBERS

PRE-CALCULUS (SERIES) – c1996

V2583.3 ANALYTIC TRIGONOMETRY – 39min
ADDITIONAL APPLICATIONS OF TRIGONOMETRY – 30min
ANALYTIC GEOMETRY – 38min

V2583.4 EXPONENTIAL & LOGARITHMIC FUNCTIONS -30min
TRIGONOMETRIC FUNCTIONS – 30min
GRAPHS OF TRIGONOMETRIC FUNCTIONS – 33min

V2583.5 PRELIMINARIES – 32min
FUNCTIONS & THEIR GRAPHS – 31min
POLYNOMIAL & RATIONAL FUNCTIONS - 32min
SYLLABUS: MTH 06 – Basic Concepts of Mathematics II (0 credits, 6 hours per week)

PREREQUISITES: MTH 05 or equivalent and RDL 02 if required.

TEXT: *Elementary and Intermediate Algebra / A Unified Approach, Fourth Edition*  
(The Streeter/Hutchinson Series in Mathematics)

AUTHORS: Baratto, Bergman


SUPPLEMENTARY TEXT: *Trigonometry Supplement* (Bronx Community College), McGraw-Hill 2008

AUTHOR: Bergman

SPECIAL FEATURES: A free, text specific, CD-ROM is included.

Supported by ALEKS: [www.highed.aleks.com](http://www.highed.aleks.com)

Note to Students: A scientific calculator with trigonometric functions such as \( \sin, \cos \) is required.

<table>
<thead>
<tr>
<th>SECTIONS</th>
<th>TOPICS</th>
<th>SUGGESTED EXERCISES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHAPTER 7 Radicals and Exponents (12 hours)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1</td>
<td>Roots and Radicals</td>
<td>pp. 723-728: 1-55 odd, optional 57-65 odd</td>
</tr>
<tr>
<td>7.2</td>
<td>Simplifying Radical Expressions</td>
<td>pp. 737-741: 1-73 odd</td>
</tr>
<tr>
<td>7.3</td>
<td>Operations on Radical Expressions</td>
<td>pp. 751-753: 1-83 odd</td>
</tr>
<tr>
<td>7.4</td>
<td>Solving Radical Equations</td>
<td>pp. 762-766: 1-9 odd, 15-49 odd, 79-87 odd</td>
</tr>
<tr>
<td>7.5</td>
<td>Rational Exponents</td>
<td>pp. 775-778: 1-109 odd</td>
</tr>
<tr>
<td>7.6</td>
<td>Complex Numbers</td>
<td>pp. 788-792: 1-85 odd</td>
</tr>
<tr>
<td><strong>CHAPTER 8 Quadratic Functions (8 hours)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Solving Quadratic Equations</td>
<td>pp. 817-819: 1 – 53 odd, optional circle problems</td>
</tr>
<tr>
<td>8.2</td>
<td>The Quadratic Formula</td>
<td>pp. 833-837: 1-77 odd</td>
</tr>
<tr>
<td>8.3</td>
<td>An Introduction to Parabolas</td>
<td>pp. 849-852: 1-53 odd</td>
</tr>
<tr>
<td>8.4</td>
<td>Problem Solving with Quadratics</td>
<td>pp. 865-868: 1-21 odd, 41-44</td>
</tr>
</tbody>
</table>
CHAPTER 9 Rational Expressions (12 hours)

9.1 Simplifying Rational Expressions pp. 888-890: 1-79 odd
9.2 Multiplying and Dividing Rational Expressions pp. 901-903: 1-43 odd
9.3 Adding and Subtracting Rational Expressions pp. 914-916: 1-57 odd
9.4 Complex Fractions pp. 925-926: 1-39 odd
9.6 Solving Rational Equations pp. 962-967: 1-79 odd

CHAPTER 10 Exponential and Logarithmic Functions (8 hours)

10.4 Exponential Functions pp. 1025-1027: 1-49 odd
10.5 Logarithmic Functions pp. 1043-1045: 1-73 odd

Trigonometry Supplement:

Applying Right Triangles (4 hours), pp. 72 – 81 p. 82-85: 1-51 odd
The Trigonometric Functions and Cartesian Coordinates (6 hours), pp. 100 – 111 p. 112-114: 1-85 odd
Circles and Radian Measure (4 hours), pp. 126 – 136 p. 137/138: 1-77 odd
The Unit Circle and the Trigonometric Functions (6 hours), pp. 148 – 156 p. 157-159: 1-75 odd
Graphing the Trigonometric Functions (6 hours), pp. 168 – 174 (Explore graphs of the type y = A sin x, y = A cos x only) p. 175/176: 1-31 odd