

**BRONX COMMUNITY COLLEGE LIBRARY  
SUGGESTED FOR  
MTH 01  
FUNDAMENTAL CONCEPTS & SKILLS  
IN ARITHMETIC & ALGEBRA**

**Textbook:** *Developmental Mathematics*, 4th edition by Johnson, Willis, and Hughes  
**Publisher:** Addison Wesley Longman, Inc.

**Section Topics of the Textbook**

**CHAPTER 1: WHOLE NUMBERS**

<b><u>CODE NO.</u></b>	<b><u>TITLE</u></b>
V1414.1	<b><u>ESSENTIAL ARITHMETIC (SERIES)</u></b> - c1991 <b>CALCULATE THE POWER OF A WHOLE NUMBER</b> 1.6 Find the product of a whole number and a power of ten 1.7 Calculate the power of a whole number 1.9 Divide by a number with more than one digit
V1414.2	<b>DIVIDE BY A NUMBER WITH MORE THAN ONE DIGIT</b> 1.9 Divide by a number with more than one digit
V1414.3	<b>USE THE CORRECT ORDER OF OPERATIONS ON WHOLE NUMBERS</b> 1.9 Divide by a number with more than one digit 1.10 Find roots of whole numbers 1.11 Use the correct order of operations on whole numbers
V1414.4	<b>FIND THE PERIMETER &amp; AREA OF A GEOMETRIC FIGURE</b> 1.13 Find the perimeter and area of a geometric figure
V1502.12	<b>FIND THE PERIMETER &amp; AREA OF GEOMETRIC FIGURES</b> 1.13 Find the perimeter of a geometric figures 1.13 Find the area of geometric figures
V2522.1	<b>LESSON 3.7: SQUARE ROOTS</b> 1.10 Square Roots - 60 min, c1973
V2234.4	<b>MEASUREMENT ANALYSIS</b> 1.13 Measurement Analysis: Perimeter, Area, Volume, Metrics - 32 min, c1992

**CHAPTER 2: FRACTIONS****FRACTIONS (SERIES)** - *c1973*

- V2521.1 2.1 Introducing fractions  
2.1 Re-naming fractions
- V2521.2 2.8 Adding fractions with the same denominator  
2.10 Adding fractions with different denominators  
2.8/2.10 Subtracting fractions
- V2521.3 2.2 Multiplying fractions  
2.14 Dividing fractions

**DEVELOPMENTAL MATHEMATICS (SERIES)***-30 min. ea. c1991*

- V1502.1 2.3 Change an improper fraction to a mixed number  
2.4 Change a mixed number to an improper fraction  
2.10 Add and subtract unlike fractions  
2.12 Subtract mixed numbers
- V1502.2 2.13 Multiply and divide mixed numbers

**ESSENTIAL ARITHMETIC (SERIES)** - *c1991*

- V1414.5 2.2 Multiply fractions  
2.7A Reduce fractions to lowest terms
- V1414.6 2.7B Shorten the multiplication of fractions  
2.14 Division of fractions  
2.8 Adding and Subtracting like fractions
- V1414.7 2.8 Subtract like fractions  
2.9 Find the least common denominator
- V1414.8 2.10 Adding and subtracting unlike fractions  
2.11 Adding mixed numbers  
2.12 Subtracting mixed numbers
- V1414.9 2.13 Multiply mixed numbers

**CHAPTER 3: DECIMAL FRACTIONS****FRACTIONS (SERIES)** - *c1973*

- V2521.5 3.3-3.4 Adding and subtracting decimal fractions  
3.5 Multiplying decimals  
3.6 & 3.12 Dividing decimal fractions
- V2234.2 3.12 Techniques in Fractions and Decimals *-32 min, c1992*

- V1414.9**      **ESSENTIAL ARITHMETIC (SERIES)** – 30 min ea. c1991  
**PROGRAM 9:**  
 3.5 Multiplication of decimal numbers
- V1414.10**      **PROGRAM 10:**  
 3.7 Multiply a decimal number by a power of ten  
 3.6 Divide a decimal number by a decimal number
- V1414.11**      **PROGRAM 11:**  
 3.9 Use the correct order of operations for decimal numbers  
 3.8 Find powers and square roots of decimals
- V1414.12**      **PROGRAM 12:**  
 3.10 Change a fraction to a decimal  
 3.11 Change a decimal to a fraction  
 Multiply decimals by fractions and mixed numbers
- CHAPTER 4: RATIO, PROPORTION AND PERCENT**
- V2521.4**      **4.1-4.2** Ratio and Proportion  
 Understanding decimal fractions
- V2234.3**      **CHAPTER 4: RATIO, PROPORTION AND PERCENT**  
**4.4** Techniques in Percents: Proportions, Ratios, Time, & Money  
 Problems – 32 min, c1992
- PERCENTS & SIGNED NUMBERS (SERIES)** - c1973
- V2522.1**      **4.4** Percents  
**V2522.2**      **4. 6-4.7** Percent in Word Problems & More Problems in Percent
- DEVELOPMENTAL MATHEMATICS (SERIES)**  
 30 min. c1991
- V1502.3**      **4.7** Solve word problems using percents
- ESSENTIAL ARITHMETIC (SERIES)** - 30 min. c1991
- V1414.13**      **4.1** Solve word problems using rates  
**4.3** Solve word problems using proportions
- V1414.14**      **CHANGE UNITS BY USING UNIT FRACTIONS SOLVE  
 PERCENT PROBLEMS**  
**4.6** Solve percent problems
- V1414.15**      **4.7** Solve word problems using percent
- CHAPTER 5: GRAPHS AND STATISTICS**
- DVD715. 4**      **5.1** Graphical Solutions to Systems of Linear Equations
- DVD715.7**      Graphs of Equations

**BRONX COMMUNITY COLLEGE**  
**Of the City University of New York**

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

**SYLLABUS: MTH 01 - Fundamental Concepts and Skills in Arithmetic and Algebra**  
**0 credits, meets 3 hours per week**

**Corequisite:** RDL 01 if required

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<b>Section Topics of the Textbook</b>	<b>Suggested Exercises</b>
1.1 Basic Definitions	p. 4/1-23 (odd)
1.2 Reading and Writing Whole Numbers	p. 7/1-25 (odd)
1.3 Rounding off Whole Numbers	p. 9/1-13 (odd)
1.4 Addition of Whole Numbers	p. 11/5-33 (odd)
1.5 Subtraction of Whole Numbers	p. 14/1-25 (odd)
1.6 Multiplication of Whole Numbers	p. 19/11,19,31,45,47
1.7 Powers of Whole Numbers	p. 21/1-23 (odd)
1.8 Powers of Ten	p. 22/1-19 (odd)
1.9 Division of Whole Numbers	p. 28/1-39 (odd)
1.10 Square Roots	p. 29/1-29 (odd)
1.11 Order of Operations	p. 32/1-29 (odd)
1.12 Average	p. 34/1-15 (odd)
1.13 Perimeter and Area	p. 36/1-11 (odd); p. 37/1,3,5,7
2.1 The Meaning of Fractions	p. 48/3-11 (odd)
2.3 Changing an Improper Fraction to a Mixed Number	p. 51/1-17 (odd)
2.4 Changing an Mixed Number to an Improper Fraction	p. 52/1-19 (odd)
2.5 Equivalent Fractions	p. 54/1-13 (odd)
2.6 Prime Factorization	p. 56/1-13 (odd)
2.7A Reducing Fractions to Lowest Terms	p. 59/1-25 (odd)
2.2 Multiplication of Fractions	p. 48/1-15 (odd)
2.7B Shortening Multiplication of Fractions	p. 60/1-17 (odd)
2.8 Adding and Subtracting Like Fractions	p. 62/1-15 (odd)
2.9 Lowest Common Denominator (LCD)	p. 64/1-11 (odd)

2.10	Adding and Subtracting Unlike Fractions	p. 67/1-37 (odd)
2.11	Adding Mixed Numbers	p. 69/1-31 (odd)
2.12	Subtracting Mixed Numbers	p. 71/1-23 (odd)
2.13	Multiplying Mixed Numbers	p. 72/1-21 (odd)
2.14	Division of Fractions	p. 74/3-39 (odd)
2.18	Comparing Fractions	p. 81/1-15 (odd)
3.1	Reading and Writing Decimal Numbers	p. 91/1-19 (odd)
3.2	Rounding off Decimals	p. 94/1-17 (odd)
3.3	Adding Decimals	p. 96/1-11 (odd)
3.4	Subtracting Decimals	p. 97/1-11 (odd)
3.5	Multiplication of Decimals	p. 99/1-13 (odd)
3.6A	Dividing a Decimal by a Whole Number	p. 101/1-21 (odd)
3.6B	Dividing a Decimal by a Decimal	p. 103/1-27 (odd)
3.7	Multiplying and Dividing Decimal by Power of Ten	p. 106/1-15 (odd)
3.10	Changing a Fraction to a Decimal	p. 112/1-15 (odd)
3.11A	Changing a Decimal to a Fraction	p. 113/1-15 (odd)
3.13	Comparing Decimals	p. 118/1-7 (odd)
4.1	Ratio and Rate Problems	p.127/3,7,11,19,25, 27,31
4.2	Proportion Problems	p. 133/3-21 (odd)
4.3	Word Problems using Proportions	p. 136/1-15 (odd)
4.4A	Changing a Decimal to a Percent	p. 138/1-9 (odd)
4.4B	Changing a Percent to a Decimal	p. 139/1-19 (odd)
4.4C	Changing a Fraction to a Percent	p. 139/1-17 (odd)
4.4D	Changing a Percent to a Fraction	p. 140/5-29 (odd)
4.5	Finding a Fractional Part of a Number	p. 143/1-25 (odd)
4.6	Percent Problems	p. 146/1-13 (odd)
4.7	Word Problems using Percent	p. 150/1-11 (odd)
5.1	Bar Graphs	p. 159/1-9 (odd)
5.3	Line Graphs	p. 165/9-17 (odd)
5.4	Circle Graphs	p. 168/1-11 (odd)