

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**

COREQUISITE: RDL 01, if required.

TEXT: *Prealgebra, A Worktext* by D. Franklin Wright, Hawkes Learning Systems,
Fourth Edition

SECTION TOPIC

Chapter 1: Whole numbers

- 1.1 Whole numbers and Rounding
- 1.2 Addition and Subtraction with Whole Numbers
- 1.3 Multiplication and Division with Whole numbers
- 1.4 Applications: Number Problems, Checking, Geometry, and Reading Graphs
- 1.6 Exponents and Order of Operations

Chapter 3: Prime Numbers and Fractions

- 3.1 Tests for Divisibility
- 3.2 Prime Numbers
- 3.3 Prime Factorization
- 3.4 Least Common Multiple (LCM)
- 3.5 Reducing and Multiplication with Fractions
- 3.6 Division with Fractions
- 3.7 Addition and Subtraction with Fractions

Chapter 4: Mixed numbers, Ratios and Proportions

- 4.1 Introduction to Mixed Numbers
- 4.2 Multiplication and Division with Mixed Numbers
- 4.3 Addition and Subtraction with Mixed Numbers
- 4.4 Complex Fractions and Order of Operations
- 4.6 Solving Equations: Ratios and Proportions

Chapter 5: Decimal Numbers and Square Roots

- 5.1 Reading, Writing and Rounding Decimal Numbers
- 5.2 Addition and Subtraction with Decimal Numbers
- 5.3 Multiplication and Division with Decimal Numbers
- 5.4 Applications in Statistics (Mean, Median, Mode, and Range)
- 5.5 Decimals, Fractions, and Scientific Notation
- 5.7 Square Roots and Pythagorean Theorem
- 5.8 Simplifying Square Roots

Chapter 6: Percent

- 6.1 Understanding Percent
- 6.2 Solving Percent Problems
- 6.3 Estimating with Percent
- 6.4 Applications: Discounts, Sales Tax, Commision, Profit, and Tipping
- 6.5 Applications: Buying a Car and Buying a Home
- 6.6 Simple Interest and Compound Interest

Chapter 10: Geometry and Measurement

- 10.1 Angles and Triangles
- 10.2 Length and Perimeter
- 10.3 Area
- 10.4 Volume