

*Montgomery College - Department of Mathematics
Takoma Park/Silver Spring Campus*

**MA090 and MA090A - Prealgebra
0 Semester Hours**

Description

For students who need a review of the fundamentals of arithmetic and have never had algebra. Emphasis throughout this review will be on word problems. Basic algebra topics, including signed numbers, positive integer exponents, polynomials, linear equations, and graphing of linear equations, will be presented. Passing the MA 090 Competency Exam is required for successful completion of this course.

MA090A is strongly recommended for students who are repeating MA 090 or who make an appropriate score on the math assessment test.

MA090 meets 3 hours each week.
MA090A meets 5 hours each week.

Prerequisites

Assessment level: RD099 or RD103

Topics

- I. Whole Numbers – No calculator
 1. Place Value
 2. Rounding
 3. Basic order of operations and exponents
 4. Applications with emphasis on terminology
- II. Integers – No calculator
 1. Basic operations including order of operations
- III. Fractions
 1. Simplifying
 2. Basic operations including order of operations
- IV. Mixed numbers , Improper fractions
 1. Operations with mixed numbers.
 2. Find least common denominators.
 3. Applications
- V. Decimals
 1. Place value
 2. Rounding

- VI. Ratio and Proportion
 - 1. Unit conversion and applications
 - 2. Percents
 - 3. Applications
- VII. Comparisons
 - 1. Inequality notation with integers, fractions, and decimals
 - 2. Converting decimals, percents, and fractions
 - 3. Number line to illustrate relationships between types of numbers
- VIII. Algebra
 - 1. Evaluating algebraic expressions
 - 2. Translating words into algebraic expressions
 - 3. Simplifying algebraic expressions
 - 4. Solving equations with integers, fractions, and decimals
 - 5. Coordinate system and plotting points
 - 6. Graphing linear equations without the calculator
 - 7. Polynomials – basic definitions
 - 8. Operations: addition, subtraction, and multiplication.
 - 9. Exponent rules – product and power
- IX. Geometry
 - 1. Perimeter of polygons
 - 2. Area of rectangle, triangle, right triangle, and circle
 - 3. Volume of rectangular prism

Text

Prealgebra - Fifth Edition, K. Elayn Martin- Gay, Prentice Hall, 2008.