Pre-Algebra - Course Syllabus

Description:
Supporting students’ needs for engaging and interactive instruction, this course encourages students to apply previously learned skills to more advanced problems in an effort to gain mastery of algebraic concepts. This course, intended for high school students, covers familiar topics—such as statistical data, ratios, proportions and percentages, spatial thinking, sequences and patterns, and polynomials and functions—in a more comprehensive manner that challenges students in preparation for more complex subjects.


Course objectives:
Throughout the course, you will meet the following goals:
- Perform operations with rational numbers and use them to simplify expressions
- Use mathematical and algebraic expressions and equations to represent and solve a variety of mathematical and real-world problems
- Understand the concept of a function and its use in representing relationships
- Exercise proportional thinking and use it to analyze the connection between ratio, proportion, and percent
- Understand geometric concepts and strengthen spatial reasoning
- Develop and use problem-solving strategies
- Use statistics to display, describe, and analyze data
- Understand counting methods, and apply them to calculate probabilities

Contents:

**Semester A**
- Chapter 1: The Tools of Algebra
- Chapter 2: Integers
- Chapter 3: Equations
- Chapter 4: Factors and Fractions
- Chapter 5: Rational Numbers
- Chapter 6: Ratio, Proportion and Percent
- Chapter 7: Equations and Inequalities

**Semester B**
- Chapter 8: Functions and Graphing
- Chapter 9: Real Numbers & Right Triangles
- Chapter 10: Two-Dimensional Figures
- Chapter 11: Three-Dimensional Figures
- Chapter 12: More Statistics and Probability
- Chapter 13: Polynomials and Nonlinear Functions

Grading Scale
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = under 59%

Grade Weighting
Chapter Quizzes.......... 70%
Cumulative Exam .......... 30%
100%