

Pre Algebra * (9th Grade Replacement Special Education)

COURSE OUTLINE

(Written August 2009)

Number/Level: 30 Pre Algebra/Special Education Replacement

Textbook:

Algebra: Concepts and Applications, Volume 1, Glencoe/McGraw-Hill Companies 2007.

Additional Resources:

AGS Pre Algebra, American Guidance Service, Inc.

AGS Algebra, American Guidance Service, Inc.

Course Length: Full Year

Credit: 5 Credits

I. Prerequisite:

Students enrolling in this course are classified as having an Individualized Education Plan. The curriculum and course objectives are followed; however, the student's Individualized Education Plan dictates any accommodations or instructional strategies utilized. This course will be mandatory for all incoming ninth grade students who have not had Algebra I in eighth grade and are recommended for the College Prep. C level. The course will also be required for all 10th grade students who have not had Algebra I in the eighth or ninth grade and are recommended for the College Prep. C level.

II. Course Description:

This is a replacement Pre Algebra course, which prepares students for replacement Algebra. The course meets five periods per week.

High Point Regional High School's curriculum and instruction are aligned to the State's Core Curriculum Content Standards and address the elimination of discrimination by narrowing the achievement gap, by providing equity in educational programs and by providing opportunities for students to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, religion, disability or socioeconomic status.

III. Course Objectives:

The student should be expected to succeed in the following objectives to the satisfaction of both the teacher and student.

1. Demonstrates the ability to set reasonable goals.
2. Demonstrates the responsibility for carrying out self-set goals.
3. Demonstrates cooperation by working constructively with other students.
4. Demonstrates cooperation with the instructor by using time constructively and with purpose, relative to course oriented goals.
5. Demonstrates cooperation with the instructor by performing requested special program oriented tasks.
6. Demonstrates independence by exploring all possible avenues in the solution of problems with the minimum of help.
7. Demonstrates independence and scholastic growth by using resources efficiently.
8. Progresses at a rate satisfactory to the teacher.

IV. District Policy: ACADEMIC INTEGRITY

Pupils are expected to be honest in all of their academic work. This means that they will not engage in any of the following acts:

- Cheating on examinations or other school assignments, including but not limited to, the non-authorized use of books or notes, the use of crib sheets, copying from other students' papers, exchanging information with other students orally, in writing, or by signals, obtaining copies of the examination illegally and other similar activities.

Cheating through the use of technology to exchange information on any school assignment, examination, etc. is prohibited. Technology is defined as, but not limited to, computers, telephones, text messaging, palm pilots, calculators, cameras or any other hand held device.

- Plagiarism is not permitted in term papers, themes, essays, reports, images, take-home examinations, and other academic work. Plagiarism is defined as stealing or use without acknowledgment of the ideas, words, formulas, textual materials, on-line services, computer programs, etc. of another person, or in any way presenting the work of another person as one's own.

- Falsifications, including forging signatures, altering answers after they have been graded, inserting answers after the fact, erasing of grader's markings, and other acts that allow for falsely taking credit.

A pupil found guilty of academic dishonesty may be subjected to a full range of penalties including, but not limited to reprimand and loss of credit for all of the work that is plagiarized. Disciplinary action may also be a consequence of such behavior. Additional consequences may apply as defined in specific department policies and guidelines.

A teacher who believes that a pupil has been academically dishonest in his/her class should resolve the matter in the following manner:

- Reprimand the student orally and/or in writing. The teacher is also authorized to withhold credit in the work due to academic dishonesty.

- If warranted, the teacher shall file a written complaint against the student with the Administration, requesting a more stringent form of discipline. The complaint must describe in detail the academic dishonesty that is alleged to have taken place, and must request that the matter be reviewed by the Administration.
- The Administration will determine if further discipline of the pupil is appropriate, and will determine the nature of the discipline on a case-by-case basis.
- If the pupil is not in agreement with the disciplinary action of the Administration, he/she may appeal the action first to the Principal and secondly to the Superintendent. If the pupil is dissatisfied with the Superintendent's disposition of the case, he/she may grieve the action in accordance with Policy No. 5710, Pupil Grievance.

V. New Jersey Core Curriculum Content Standards Addressed:

- **Standard 4.1: Number and Numerical Operations**

All students will develop number sense and will perform standard numerical operations and estimations on all types of numbers in a variety of ways.

- **Standard 4.3: Patterns and Algebra**

All students will represent and analyze relationships among variable quantities and solve problems involving patterns, functions and algebraic concepts and processes.

- **Standard 4.4: Data Analysis, Probability and Discrete Mathematics**

All students will develop an understanding of the concepts and techniques of data analysis, probability and discrete mathematics and will use them to model situations, solve problems and analyze and draw appropriate inferences from data.

- **Standard 4.5: Mathematical Processes**

All students will develop an understanding of the methods of problem solving. They will be able to communicate their answers in mathematical and make connections between real life applications. They will use reasoning in order to select the best process to solve problems. In addition they will use representations to display their work. The students will incorporate technology throughout the curriculum.

VI. Algebra Core Content Standards Addressed:

O: Operations on Numbers and Expressions

O1. Number Sense and Operations

O1.a Reasoning with real numbers

O1.b Using ratios, rates, and proportions

O1.B1 Using variables in different ways

O1.B2 Using matrices

O1.c Using numerical exponential expressions

O2.a Using algebraic exponential expressions

L: Linear Relationships

L1. Linear Functions

L1.a Representing linear functions in multiple ways

L1.b Analyzing linear functions

L1.c Graphing linear functions involving absolute value

L1.d Using linear models

L2. Linear Equations and Inequalities

L2.a Solving linear equations and inequalities

L2.b Solving equations involving absolute value

L2.c Graphing linear inequalities

L2.d Solving systems of linear equations

L2.e Modeling with single variable linear equations, one-or-two-variable inequalities or systems of equations

D: Data, Statistics, and Probability

D1. Data and Statistical Analysis

D1.a Interpreting linear trends in data

D1.b Comparing data using summary statistics

D1.c Evaluating data-based reports in the media

D2 Probability

D2.a Using counting principles

D2.b Determining probability

VII. Student Evaluation:

Grades will be calculated according to the school grading policy and the following guidelines:

Short quizzes and chapter tests will be given throughout each semester. In addition, students will be assigned projects to be completed throughout the year. An exam will be given at the end of each semester, covering all of the work completed in that semester.

A. Marking Period		
Tests, Quizzes and Projects		80% - 90%
Homework and Participation		10% - 20%
B. Final Grade		
Each Marking Period		20 %
Midterm Exam		10 %
Final Exam		10 %

VIII. Course Objectives:

The student should be expected to succeed in the following objectives to the satisfaction of both the teacher and student.

1. Write, simplify, and evaluate algebraic expressions.
2. Collect, organize and display data.
3. Graph, compare, and order integers.
4. Graph points on a coordinate plane.
5. Add, subtract, multiply and divide integers.
6. Compare, order, add, subtract, multiply and divide rational numbers.
7. Find the mean, median, mode, and range of a set of data.
8. Solve addition, subtraction, and absolute value equations.
9. Use tree diagrams and the Fundamental Counting Principle to count outcomes.
10. Solve equations involving multiplication and division, more than one operation, variables on both sides, or grouping symbols.
11. Solve problems involving proportions and percents.
12. Find the probability of mutually exclusive events and inclusive events.
13. Show relations as ordered pairs, tables, and graphs.
14. Solve and graph linear equations.
15. Determine whether a relation is a function.
16. Solve problems involving direct and inverse variation
17. Find the slope of a line.
18. Write linear equations in slope-intercept and point-slope form.
19. Graph and interpret scatter plots.
20. Graph and explore linear equations and families of linear equations.
21. Write equations of parallel and perpendicular lines.