

Algebra I (Mathematics)

Required – Year – 9/10

Prerequisites: None

Course Philosophy and Description

The philosophy of Algebra I revolves around the ability of math to describe quantitatively the wonders of God's creation. This course in Algebra covers equation solving plus a presentation of problems where the methods learned can be used. An introduction to graphing of linear equations and some higher level functions will occur toward the end of the second semester.

Course Goals

The student will:

1. review concepts taught in previous math courses.
2. acquire the techniques used in solving equations.
3. be introduced to real life situations where equations solving skills will be needed.
4. use simple techniques for solving systems of equations.
5. interpret verbal problems as systems and solve them.
6. be introduced to graphing on a coordinate plane and problems that can be solved doing this.
7. learn to use a scientific calculator.

Course Objectives

The student should be able to:

1. solve an equation or inequality.
2. translate a problem into an equation.
3. change from scientific notation to decimal notation and visa versa.
4. factor polynomial expressions in order to find their roots.
5. graph a linear equation or inequality.
6. use a calculator to find roots of number and values of trig functions.

Course Outline

1. Introduction to the ideas of algebra and math
2. Review of rational numbers
3. Equation solving
4. Applications of rational numbers
5. Inequalities
6. Polynomials
7. Factoring polynomials
8. Rational expressions
9. Introduction to functions and graphs
10. Graphing linear equations
11. Systems of equations
12. Radical expressions
13. Quadratics
14. Introduction to trigonometry

Instructional Strategies

Teaching strategies include lecture, demonstration, group activities, and daily practice.

Student Materials

Algebra I Glencoe/McGraw –Hill, 2010, notebook, three-ring binder, scientific calculator

Grading

The student's semester grade is based on a point system. Points will be derived from daily assignments, quizzes, chapter tests and the semester test. All daily assignments are graded on a three-point system. The first point is received for completing the assignment on time. The second point is received for showing work for the problems on the assignment. The third point is received for passing the assignment. Percents for grading go as follows:

A+ = 100-99%	A = 98-93%	A- = 92-90%
B+ = 89-87%	B = 86-83%	B- = 82-80%
C+ = 79-77%	C = 76-73%	C- = 72-70%
D+ = 69-67%	D = 66-63%	D- = 62-60%
F = 59-0%		

Classroom Procedures

Chapter tests will be given every two or three weeks. Missed tests should be made up in two days. Daily homework assignments will be given credit for completion and will be part of the overall semester grade. All daily assignments from the text must be done in the student's notebook. These notebooks may be collected at any time. Quizzes will be given for each new concept or lesson taught. These should be made up upon return to school if missed. It is the student's responsibility to get assignments when class is missed.

All students need to be seated when the bell rings. We will normally begin class by reviewing the previous lesson. Be prepared to ask questions if you did not understand something. Do not come to class and say "I didn't get it." Questions need to be specific. This review will then be followed by a quiz to test this knowledge. Remember to show your work as you do problems on both your quizzes and assignments. You will not get credit if you do not show your work.