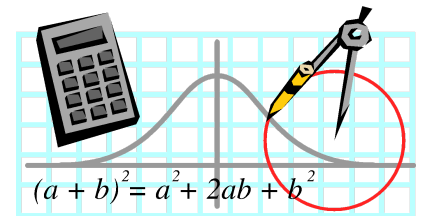


Algebra III 2019-20
Mr. Troy Bargender - Room 201
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Prerequisites for Algebra III

Successful completion of Algebra II

Course Description

The content of Introduction to College Algebra emphasizes algebraic techniques with polynomials, fractional expressions, exponents and radicals, linear and quadratic equations and inequalities. Other topics include introductions to functions, their graphs and analytic geometry.

Textbook: College Algebra (2nd Edition) by Julie Miller and Donna Gerken

Course Content

The real number system:

- Sets and the real number line.
- Integer exponents and scientific notation.
- Rational exponents and radicals.
- Polynomials and multiplication of radicals.
- Factoring.
- Rational expressions.

Equations and inequalities:

- Solving linear equations and inequalities.
- Solving application word problems involving linear and rational equations.
- Complex numbers.
- Quadratic equations with applications.
- Solving equations and inequalities involving absolute value.

Functions and relations:

- Rectangular coordinate system and graphing.
- Circles.
- Functions and relations.
- Linear equations in two variables.
- Applications of linear equations and modeling.
- Transformations of graphs.
- Analyzing graphs of functions and piecewise defined functions
- Algebra of functions and function composition..

Polynomial and Rational functions:

- Quadratic , polynomial, and rational functions and applications.
- Division of polynomials and the remainder and factor theorems.
- Zeros of polynomials.
- Polynomial and rational inequalities.
- Variation.

Exponential and logarithmic functions:

- Inverse, exponential, and logarithmic functions.
- Properties of logarithms.
- Exponential and logarithmic equations and applications with modeling.

Course Outcomes: Upon completion of this course, every student will be able to state **I CAN...**

- Understand how the order of operations utilized in arithmetic extends to algebraic expressions.
- Extend the rules of integer exponents to rational exponents and learn to apply these in simplifying algebraic expressions.
- Formulate simple real world applications in one or more variables and solve them algebraically and/or graphically.
- Explore various forms of linear equations, their graphs and the interpretation of their parameters.
- Become familiar with a variety of factorization techniques and their use in solving equations involving polynomials, rational expressions and radicals.
- Work in the rectangular/Cartesian coordinate system with linear equations and other equations.
- Use the algebraic skills learned to solve real world application problems.
- Where appropriate, use scientific/graphing calculators to explore and answer various algebraic questions.

Supply List

- Scientific/graphing calculator with trigonometric functions (sin, cos, and tan)
- Notebook (either two separate notebooks or a two-subject notebook)
- Pen or pencil (preferably pencil)
- Folder

Classroom Rules and Expectations

1. Need notebook/s, Chromebook, pen or pencil (preferably pencil), folder, and calculator.
2. You must be in your seat when the bell rings and remain seated until the bell rings to end class.
3. Food or drinks (other than water) should not be brought to class. Gum is allowed as long I can't see or hear it. (No bubbles or snapping of gum)
4. Cell phones are only allowed with teacher permission.
5. Show respect to your classmates and myself by listening when somebody else is talking.
6. Show up for class on-time, be prepared, and be willing to learn.
7. Do your own work! **Cheating will result in no credit for that assignment or quiz/test.**
8. If you don't understand something in class, you need to ask for help!

Absences

You are responsible for making up any material you missed while you were absent.

Grading System

Grades will be determined as follows:

| | |
|-----|---------------------------------|
| 10% | - Homework/In-class assignment |
| 20% | Formative Assessments (Quizzes) |
| 50% | Summative Assessments (Tests) |
| 20% | Semester Exam |

Grading Scale

| | | | | | |
|--------|----|-------|----|-------|----|
| 93-100 | A | 80-82 | B- | 68-69 | D+ |
| 90-92 | A- | 77-79 | C+ | 66-67 | D |
| 87-89 | B+ | 73-76 | C | 65 | D- |
| 83-86 | B | 70-72 | C- | 0-64 | F |

Retake Policy

Students will be allowed to retake only one summative assessment per semester.

Additional Help

Students who are struggling or want extra help should talk to me often. I will be available before and after school by appointment. Throughout the school day you can get help during Advisory or 8th hour during my Prep. Don't be afraid to ask for help!

Parents please call or email if you have any questions or your child needs additional help. Sign below to signify that you have read and understand the policies for Algebra III .

Student name (please print)

Student Signature

Parent/s name (please print)

Parent Signature

Parent email address (please print clearly)

Phone # for contacting parent/s

Date