Algebra 2 Semester Syllabus

Cocke County High School

Part 1: Course Information

Course: Algebra 2

Instructor Information

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Course Description:

Algebra II emphasizes polynomial, rational and exponential expressions, equations, and functions. This course also introduces students to the complex number system, basic trigonometric functions, and foundational statistics skills such as interpretation of data and making statistical inferences. Students build upon previous knowledge of equations and inequalities to reason, solve, and represent equations and inequalities numerically and graphically.

Prerequisite Algebra 1 Credit

Textbook & Course Materials Required Text

Algebra 2 by Savvas online

Course Structure Methods:

The course is taught using a variety of instructional methods including lectures, classroom discussions, small group work, and electronic displays.

Assessment Methods

Tests: A test will be given periodically to check for mastery. Tests will count as 50 points toward the student's grade.

Lesson Quizzes: Lesson quizzes will be given about once a week at my discretion. Quizzes will count as 30 points toward the student's grade.

In-class Participation/Classwork/Homework

Classwork will be given daily and assignments are often followed by a Daily Quiz. Periodic Class participation and Homework(HW) and Classwork(CW) grades are collected and will count as 10 point assignments toward the student's grade.

EOC

An End-of-course (EOC) assessment will be given by the State of Tennessee towards the end of the semester.

Extra Credit

Test Retakes: Students are allowed to retake exams before the next test. Students must first correct the original exam and show work, which I will check, then the student will take a different version of the exam, which is best described as the same type of problems with different numbers. The highest exam grade (original or

retake(s)) will be put into the gradebook. Retakes must be done at school under my supervision. It may be done during a class block or after school. Retakes must be done before the next exam.

Part 2: Student Learning Outcomes

The major work of Algebra II is from the following domains and clusters:

- The Real Number System
- Extend the properties of exponents to rational exponents.
- Seeing Structure in Expressions Interpret the structure of expressions.
- Use expressions in equivalent forms to solve problems.
- Arithmetic with Polynomials and Rational Expressions
- Understand the relationship between zeros and factors of polynomials.
- Reasoning with Equations and Inequalities
- Understand solving equations as a process of reasoning and explain the reasoning. Represent and solve equations graphically.
- Interpreting Functions Interpret functions that arise in applications in terms of the context.
- Building Functions Build a function that models a relationship between two quantities. Making Inferences and Justifying Conclusions
- Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

Supporting work is from the following domains and clusters:

- Quantities Reason quantitatively and use units to solve problems.
- The Complex Number System
- Perform arithmetic operations with complex numbers.
- Use complex numbers in quadratic equations.
- Arithmetic with Polynomials and Rational Expressions
- Use polynomial identities to solve problems.
- Rewrite rational expressions.
- Creating Equations Create equations that describe numbers or relationships.
- Reasoning with Equations and Inequalities
- Solve equations and inequalities in one variable.
- Solve systems of equations.
- Interpreting Functions Analyze functions using different representations.
- Building Functions Build new functions from existing functions.
- Linear, Quadratic, and Exponential Models Construct and compare linear, quadratic, and exponential models and solve problems.
- Interpret expressions for functions in terms of the situation they model.
- Trigonometric Functions Extend the domain of trigonometric functions using the unit circle. Prove and apply trigonometric identities.

- Interpreting Categorical and Quantitative Data Summarize, represent, and interpret data on a single count or measurement variable.
- Summarize, represent, and interpret data on two categorical and quantitative variables. Conditional Probability and the Rules of Probability
- Understand independence and conditional probability and use them to interpret data.
- Use the rules of probability to compute probabilities of compound events in a uniform probability model.

Part 3: Topic Outline/Schedule

Semester 1&2: Predicted Timeframe ***

Late Work Policy

I accept late work, but daily quizzes, quizzes, and tests must be done in the classroom.

Part 4: Grading Policy Assignment Weight:

Grade based on Total points
In-Class Participation/Daily Quizzes: 10 points
Lesson Quizzes: 30 points
Tests: 50 points
Letter Grade Assignment
Letter Grade Percentage

- A 100-90%
- B 89-80%
- C 79-70%
- D 69-60%
- F 59-0%

Part 5: Classroom Rules

Classroom rules:

- Respect each other and your teacher
- Respect each other's privacy
- Be prepared to work and participate in class each day
- Work the entire period.
- You may prepare to leave 2 minutes before the bell rings
- Remain in your seat unless the teacher asks you to move
- Do not write on the desks
- Students must follow ALL the policies put forth in the student handbook
- o Cell Phone Policy follows District
- o Dress Code follow school policy
- o Tardy Policy follow school policy

Algebra 2 Semester Syllabus

- NO throwing in class whatsoever, detention will be assigned if caught throwing
- Food and Drinks are allowed (as a privilege & may be taken away)
    - o Food must be cleaned up
    - o Drinks must have a cap on it
    - 1 piece of gum is allowed (as a privilege & may be taken away)
        - o Must not hear it or see it

***Mr. Barnes is able to add rules as deemed necessary

Academic Dishonesty Policy: If found using a cellphone, using AI, copying off of another student, or any other form of cheating, the student will receive a zero for the assignment grade.