

Cocke County High School

Part 1: Course Information

Instructor Information

Course: Algebra 2
Instructor: Kathryn Banks
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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

- Integrated Math II Credit

General Education/High School Pathway Area

- This is one of the four required math courses for graduation

Textbook & Course Materials

Required Text

- Algebra 2 by Ron Larson & Laurie Boswell, Big Ideas Learning, 2022
- Additional Resources: Khan Academy, Wolfram.com, other online resources and applications

Course Requirements

- **2" Notebook**
- **Notebook Dividers: Notes, Classwork, Quizzes, Tests**
- **Paper**
- **Pencils**
- **Graph Paper**
- TI-84 Plus CE Calculator

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% of the student's grade.

Lesson Quizzes

- Lesson quizzes will be given about once a week at my discretion. Quizzes will count as 35% of the student's grade.

In-class Participation/Classwork

- Classwork will be given daily followed by a Daily Quiz over the day's content
- Class participation will be determined by use of popsicle sticks and completed classwork
- Together, Class participation and Daily Quizzes will count as 15% of 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

- **Leave the Classroom Passes (3):** The student will be allowed to leave the classroom no more than three times each 9 weeks. At the end of each 9 weeks, I will take up the student's hall pass to check how many times the student left the room. For each time the student did not use the pass, I will drop a lowest Cumulative Quiz grade. **If a student has a medical reason to be exempt from the limit of three, please bring in a doctor's note.**
- **Test Retakes:** Students are allowed to retake exams as many times as they would like before the next test. Students must first fix the original exam, which I will check, then the student will take a different version of the exam, which is best described as 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:

In-Class Participation/Daily Quizzes: 15%

Lesson Quizzes: 35%

Tests: 50%

To calculate grades in Aspen:

$(\text{average Classwork})(.15) + (\text{average Quiz})(.35) + (\text{average Test})(.50) = \text{total} / 3$

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

***Ms. Banks is able to add rules as deemed necessary

Academic Dishonesty Policy

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

Student Testing Code of Ethics and Security

It is important for you as a student to know that the following guidelines are to be strictly followed. This year the TNReady EOC test will count at least 15 % of your final semester grade. Your work on this test is very important and it deserves your best effort.

I understand that during testing on the days of the assessment, I am responsible for:

- Not having any electronic devices on me or in my purse/backpack/pockets
 - Including but not limited to cell phones, smart phones, smart watches, etc. **during testing or during breaks.**
 - Best practice is for students to leave devices at home or in their lockers on the day of testing.
 - If I am caught with a device during testing or during breaks, my test may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level disciplinary action as deemed appropriate by the administration.
- Trying my best on the test
 - If I do not attempt to test (I give **no answers or randomly answer** questions) my test score may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level disciplinary action as deemed appropriate by the administration.
 - The testing administrators and proctors in the testing environment will determine if no answers or random answering is taking place.
 - I will focus and put forth effort on the test.
- Being honest and not cheating
 - If I am caught cheating (taking pictures of the test, writing down and passing answers, talking to other students, looking on other computers, using software outside the testing platform), my test may be nullified, resulting in a zero as at least 15% of my semester grade, and any school level disciplinary action as deemed appropriate by the administration.

Please sign and return to Ms. Banks

Student Signature

- I understand the required materials to bring to class everyday
- I understand the class description
- I understand the expectations listed above
- I understand the grading policy
- I understand and will follow the class rules

Student Name

Student Signature

Student Email

Parent/Guardian Signature

- I will help my child with the needed materials
- I understand the class description
- I understand the expectation of my child in class
- I understand how my child will be graded
- I understand the class rules my child will need to follow

Parent or Guardian Name

Parent or Guardian Signature

Parent or Guardian Email