Texas High School Algebra 1 Syllabus

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Course Overview

Algebra 1 is a foundational math course that aligns with the Bluebonnet Learning Math curriculum. It is designed to develop students' understanding of algebraic concepts and enhance their problem-solving skills. The course includes essential topics in algebra to prepare students for more advanced mathematics and practical applications.

Course Objectives

By the end of this course, students will be able to:

1. Understand and use algebraic structures and operations.
2. Analyze and solve linear equations and inequalities.
3. Work with functions, including linear and quadratic functions.
4. Model and solve real-world problems using algebraic techniques.
5. Interpret and represent data with algebraic methods.

Required Materials

- Textbook: Bluebonnet Learning Algebra 1(Provided)
- Notebook Paper (Graph Paper Recommended)
- Folder with pockets and brads
- Scientific Calculator (TI-84 or similar) (Provided)

Course Content

1. Foundations of Algebra

- **Expressions, Equations, and Inequalities**: Understanding and manipulating algebraic expressions and equations.
- **Properties of Real Numbers**: Working with different types of numbers and their properties.

2. Linear Equations and Inequalities

- **Solving Linear Equations**: Techniques for solving one-step, two-step, and multi-step equations.
- **Solving and Graphing Linear Inequalities**: Methods for solving inequalities and representing solutions graphically.
- **Applications**: Real-world problems involving linear equations and inequalities.

3. Functions and Models

- **Understanding Functions**: Definition, notation, and interpretation of functions.
- **Linear Functions**: Graphing, analyzing, and solving linear functions.
- **Function Families and Modeling**: Using functions to model and solve real-world problems.

4. Systems of Equations and Inequalities

- **Solving Systems**: Methods for solving systems of linear equations by graphing, substitution, and elimination.
- **Systems of Inequalities**: Solving and graphing systems of linear inequalities.
- **Applications**: Real-world scenarios involving systems of equations and inequalities.

5. Polynomials and Factoring

- **Operations with Polynomials**: Adding, subtracting, and multiplying polynomials.
- **Factoring**: Techniques for factoring polynomials, including factoring by grouping and using special products.
- **Quadratic Functions**: Introduction to quadratic functions and their graphs.

6. Quadratic Functions and Equations

- **Solving Quadratic Equations**: Methods for solving quadratic equations, including factoring, completing the square, and using the quadratic formula.
- **Graphing Quadratic Functions**: Analyzing the vertex form, standard form, and intercept form of quadratic functions.
- **Applications**: Real-world problems involving quadratic functions and equations.

7. Data Analysis and Probability

- **Interpreting Data**: Using algebra to interpret and analyze data.
- **Probability**: Basic concepts of probability and how it applies to real-world situations.

Grading Policy

Daily Grades (60%):

- **Homework (30%)**: Homework assignments will be given regularly and must be completed on time. Late work will incur a penalty unless prior arrangements are made.
- **Classwork (30%)**: Participation in class activities, group work, and daily exercises will be assessed.
- **Recording**: There will be a minimum of 6 daily grades recorded every 6 weeks.

Test Grades (40%):

- **Tests (40%)**: There will be three major tests each grading period, covering the material studied. Each test will contribute to the overall grade.
- **Recording**: There will be a minimum of 3 test grades recorded every 6 weeks.

Attendance and Participation

- Regular attendance is crucial for success in Algebra 1. Excessive absences may impact your understanding of the material and your overall grade.
- Active participation in class discussions and activities is expected. This will contribute to your daily grades.

Classroom Policies

- **Respect**: Respect for classmates, instructor, and classroom materials is required.
- **Electronics**: Phones and other electronic devices should be silenced and put away unless instructed otherwise.
- **Late Work**: Assignments turned in late will be penalized unless a valid excuse is provided.

Support and Resources

- **Tutoring**: Extra help is available during scheduled times or by appointment. Additional tutoring sessions may be scheduled as needed.

Important Dates

- **End of First Six Weeks:** Sept. 19, 2025
- **End of Second Six Weeks:** Oct. 31, 2025
- **End of Third Six Weeks:** Dec. 19, 2025
- **End of Fourth Six Weeks:** Feb. 13, 2026
- **End of Fifth Six Weeks:** Apr. 2, 2026
- **End of Sixth Six Weeks:** May 20, 2026

Note: This syllabus is subject to change based on the needs of the class and other factors. Any changes will be communicated promptly.