



K-12
TEXAS TECH

Algebra I A v8.0 – Syllabus

Course Name

ALG1-A

ALGEBRA I v8.0 – Semester A

Course Information

ALG1-A is the first semester of this two-semester course.

In Algebra 1-A, you will focus on the Algebra 1 benchmarks related to linear functions. The Lessons are designed to help you develop fundamental algebraic skills for problem-solving in the real world. To fulfill the Algebra 1 requirement for high school graduation, you must finish this sequence by completing Algebra 1-B or Algebra 1.

Instruction will be focused to ensure mastery in these four areas:

- extending understanding of functions to linear functions and using them to model and analyze real-world relationships
- solving linear equations and inequalities in one variable and systems of linear equations and inequalities in two variables
- building linear functions, identifying their key features, and representing them in various ways
- representing and interpreting categorical and numerical data with one and two variables

Course Delivery Method

Online

Contacting Your Instructor

You may contact your instructor using your Canvas Inbox. Technical support is available 24/7 at [TTU K-12](#).

Course Topics

After completing this course, students should be able to:

- Identify parts of an expression and equation.
- Rearrange equations or formulas to isolate a quantity of interest.
- Explain if a solution to a one-variable equation is viable or non-viable based on context.
- Write and solve one-variable multi-step equations from a real-world context.
- Write and solve one-variable absolute value equations from a mathematical and a real-world context.
- Write, solve, and graph a one-variable linear inequality.
- Write, solve, and graph a one-variable compound inequality.
- Graph a two-variable linear equation from slope-intercept, point-slope, or standard form.
- Write a two-variable linear equation from a graph, table, or written context.
- Solve problems involving simple interest.
- Find the slope of a parallel or perpendicular line to a given line.
- Write a two-variable linear equation for a line that is parallel or perpendicular to a given line.
- Write, solve, and graph a two-variable linear inequality from slope-intercept, point-slope, or standard form.

Textbook and Materials

No textbooks required. All content is within Canvas.

Materials

- Handheld or online scientific calculator

Technical Requirements

- Internet access – preferably high speed (for accessing Canvas)
- browser (we recommend Chrome)
- supported browser plugins and settings
The following plugins and settings may be required to use our courses.
 - JavaScript enabled
 - Cookies enabled
 - Java installed
- Email
- Printing capabilities
- Adobe Reader (download from [Adobe](#))
- Audio and video capabilities (for watching/listening to course content)
- PDF app (free options available)

Technical Skill Requirements

Be comfortable with the following:

- accessing online learning materials via Canvas
- Internet search engines and browsers (we recommend Chrome)
- uploading assignments into Canvas (there will be instructions for uploading assignments)

Course Pacing

This course is designed to be completed in 18 weeks.

- Print this guide and use a calendar to fill in your goal dates for completing each Module.
- Note that you must have a grade of 70 or above on a Discussion-Based Assessment (DBA) in order to continue moving forward in the course. DBAs occur every other lesson.
- To achieve success, students are expected to submit work in each course weekly.
- Students can learn at their own pace; however, "any pace" still means that students must make progress in the course every week.
- Post the pace guide in a place where you and your Parent or Guardian will see it every day (on the refrigerator or next to the computer). Give yourself a check every time you complete a task, and celebrate your efforts!

Weeks	Lessons	Due Date (you write this in)
1	01.00 Expressions and Equations Introduction 01.01 Parts of Expressions and Equations 01.02 Rearranging Equations and Formulas 01.03 Solving One-Variable Linear Equations 01.04 Writing One-Variable Linear Equations	

Weeks	Lessons	Due Date (you write this in)
2	01.05 Mathematical Absolute Value Equations 01.06 Real-World Absolute Value Equations 01.07 Expressions and Equations Practice Exam 01.09 Expressions and Equations Exam	
3	02.00 One-Variable Linear Inequalities Introduction 02.01 Graphing One-Variable Linear Inequalities 02.02 Solving One-Variable Linear Inequalities 02.03 Writing One-Variable Linear Inequalities 02.04 Graphing Compound Inequalities	
4	02.05 Solving Compound Inequalities 02.06 Writing Compound Inequalities 02.07 One-Variable Linear Inequalities Practice Exam 02.09 One-Variable Linear Inequalities Exam	
5	03.00 Two-Variable Linear Equations and Inequalities Introduction 03.01 Slope-Intercept Form 03.02 Point-Slope Form 03.03 Standard Form	
6	03.035 Making Sense of Linear Functions 03.04 Parallel and Perpendicular Lines 03.05 Graphing Two-Variable Linear Inequalities 03.06 Writing Two-Variable Linear Inequalities	
7	03.07 Two-Variable Linear Equations and Inequalities Practice Exam 03.08 Discussion-Based Assessment 03.09 Two-Variable Linear Equations and Inequalities Exam Midterm Exam	
8	04.00 Systems of Equations and Inequalities Introduction 04.01 Solve Systems of Equations by Graphing	

Weeks	Lessons	Due Date (you write this in)
9	04.02 Solve Systems of Equations by Substitution 04.03 Solve Systems of Equations by Elimination 04.04 Real-World Systems of Equations	
10	04.05 Graphing Systems of Inequalities 04.06 Applications of Systems	
11	04.07 Systems of Equations and Inequalities Practice Exam 04.09 Systems of Equations and Inequalities Exam	
12	05.00 Functions Introduction 05.01 Introduction to Linear Functions 05.02 Intercepts and Rate of Change 05.03 Domain and Range	
13	05.04 Transformations of Linear Functions 05.05 Absolute Value Functions 05.06 Transformations of Absolute Value Functions	
14	05.07 Functions Practice Exam 05.08 Discussion-Based Assessment 05.09 Functions Exam 06.00 Linear Modeling Introduction 06.01 Linear Functions in the Real World	
15	06.02 Correlation and Causation 06.03 Line of Fit 06.04 Line of Fit in the Real World 06.05 Scatter Plots and Residuals	
16	06.06 Interpreting Scatter Plots 06.07 Linear Modeling Practice Exam 06.09 Linear Modeling Exam Final Exam	
17	Floating Vacation Week	
18	Floating Vacation Week	

Course Credit

Your grade will be calculated as follows:

- formative assessments (50%)
- summative assessments (20%)
- summative final exam (30%)

Assignments are labeled as “summative” or “formative” under Grades in Canvas.

Course Completion and Extensions

- Students may not complete the course in less than 30 days.
- All courses expire 180 days after the enrollment date.

Academic Integrity

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

“Scholastic dishonesty” includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Artificial Intelligence (AI) Use Policy

This policy covers any generative AI tool, such as ChatGTP, Elicit, Photo Math, etc. This includes text and artwork/graphics/video/audio, etc.

All work submitted in this course must be your own. You may not use artificial intelligence tools to complete your assignments in this course.

If an instructor suspects that an assignment is not the work of the student, it will receive a score of zero. The instructor will message the student or provide feedback on the assignment indicating the need to schedule a one-on-one video conference, during which the student will be required to demonstrate their skills or knowledge through an alternative or mutually agreed-upon assignment. The grade of the alternate or agreed upon assignment will be determined at the instructor’s discretion with the highest possible score being 70%.

If it is determined that a student has violated final exam directions on Final Exam A or CBE Set 1, the exam will be scored as zero. The student may take Final Exam B or CBE Set 2 with the highest possible score being 70%.

The incident will be reported to Texas Tech K-12 Administration and documented in the student’s file. Continued violations of Texas Tech University’s Academic Integrity Policy will result in the removal of the student from the program.

Student/Parent Expectations

You will be expected to log into the Canvas course regularly to be aware of possible announcements/reminders and to pace your student's progress in the course.

The following are prohibited while using the Canvas interface:

- spamming;
- hacking; and
- using TTU or Canvas email for commercial purposes;

Inappropriate behavior shall result in consequences ranging from a request to correct the problem, to removal from the course or even the university, depending on the severity of the behavior. Disciplinary actions will be taken according to the TTU K-12 Student Handbook.

Communication

- You can expect a reply from your instructor within 2 business days.
- Use the Canvas Inbox for sending messages to your instructor.

Submitting Assignments

You will submit all assignments through Canvas, rather than by mail or email.

Technical Difficulties

Getting Help

For student assistance with Canvas, visit [TTU K-12 Support](#).

Computer Problems

A working computer is necessary for online coursework. Computer problems will not be accepted as a valid reason for failure to complete course activities within the allotted time frame. Identify a second computer, before the course begins, that you can use if you experience computer problems.

Server Problems

When the Canvas server needs to be taken down for maintenance, the Canvas administrator will post an announcement in your course informing you of the time and date. If the server experiences unforeseen problems, your course instructor will notify you.

Lost or Corrupted Files

You must keep/save a copy of every project/assignment on an external disk or personal computer. In the event of any kind of technology failure (e.g., Canvas server crash or

virus infection, students' own computer problems, loss of files in cyberspace, etc.) or any disputes, the instructor may request or require you to resubmit the files. In some instances, the instructor may need to open another attempt within Canvas, so communication with your instructor is critical in these circumstances.