Accelerate to Algebra 2

Credits: 0.5

Course Overview and Goals

Accelerate to Algebra 2 is a short course designed to prepare you for success in Algebra 2. It focuses on reviewing the essential skills and mathematical concepts that serve as the foundation for your upcoming learning. You will apply your understanding of algebraic techniques for representing relationships and use these relationships to solve problems. You will also explore how statistics and probability can be used to draw conclusions and make predictions.

By the end of this course, you will be able to do the following:

- Rewrite and interpret expressions using algebraic properties.
- Write one-variable and two-variable equations and use them to solve problems.
- Solve systems of linear equations using algebraic methods.
- Identify and interpret key features of linear, quadratic, and exponential functions.
- Describe correspondences among representations of functions.
- Represent data with scatter plots and apply mathematical models to solve problems.
- Apply probabilities and use random samples to make inferences about populations.
- Analyze, interpret, and represent data in tables, graphs, and charts.

Course Components and Grading Rubric

The table gives a breakdown of the weight for each component in the course. Weight represents the percentage of the total score coming from each activity.

Course Components	Count	Weight*
Pretest. *A pretest is an optional assessment, typically designed for credit recovery. If a student shows mastery of a lesson objective, the student may be automatically exempted from the upcoming activities associated with the mastered objective. Pretests are not included as a component of the student's final grade.*	1	0%

Course Components	Count	Weight*
Module. *Each module in this course contains an interactive tutorial or study and an associated mastery test. Tutorials and studies combine instruction and practice to prepare students for the mastery test, which is a computer-scored lesson-level summative assessment. The module score comes from a student's score on the mastery test.*	15	50%
Posttest. *A posttest appears at the end of each unit.*	1	50%
Total	**17**	**100%**

Weight Teachers may manually adjust these weights if desired, per district grading requirements.*

Scope and Sequence

ESSENTIAL LEARNING

Lesson	Lesson Objective
Syllabus	Review the Course Syllabus at the beginning of the course.
Radical Expressions	In this lesson, you will rewrite numerical radical expressions involving square roots.
Properties of Exponents	In this lesson, you will use the laws of exponents to rewrite monomial expressions and ratios of monomial expressions.
Adding and Subtracting Polynomials	In this lesson, you will determine sums and differences of polynomials.
Factoring Polynomials, Part 1	In this lesson, you will use factoring techniques and distribution to rewrite quadratic expressions.
Solving Linear Equations	In this lesson, you will solve multistep linear equations in one variable.

Lesson	Lesson Objective
Solving Systems of Equations	In this lesson, you will solve systems of linear equations using algebraic and graphical methods.
Function Notation	In this lesson, you will use function notation to describe relationships between quantities and interpret function notation accurately to solve problems.
Writing Linear Functions and Equations	In this lesson, you will write linear equations and functions in two variables and graph them to display the relationship.
Quadratic Relationships	In this lesson, you will explore quadratic relationships and use their graphs to identify key attributes.
Graphs of Exponential Relationships	In this lesson, you will graph exponential functions and identify their key features.
Comparing Functions	In this lesson, you will compare and translate representations of linear, exponential, and quadratic functions.
Using Models from Data	In this lesson, you will evaluate the reasonableness of mathematical models and use them to make predictions.
Making Predictions Based on Random Samples	In this lesson, you will use data from a random sample to draw conclusions about a population.
Comparing Data Sets	In this lesson, you will compare multiple data sets using statistics and interpret differences in shape, center, and spread.
Sample Space and Venn Diagrams	In this lesson, you will describe events as subsets of a sample space and use the sample space to evaluate probabilities.