Algebra I-A and I-B provide an expanded, two-year course sequence designed for students who are not prepared for the academic challenges of the traditional one-year Algebra I curriculum.

Algebra I-B course topics include a review of introductory algebra; measurement; graphing data; linear equations; systems of linear equations; polynomials; factoring of polynomials; factoring of quadratic functions; rational expressions; and radical expressions.

Algebra I-B features ample opportunity for students to hone their computational skills by working through practice problem sets before moving on to formal assessment.

To assist students for whom language presents a barrier to learning or who are not reading at grade level, Algebra I-B includes audio resources in both Spanish and English.

Two versions of the Algebra I-B course are offered: one aligned with Florida's Next Generation Sunshine State Standards and Benchmarks, and the other with California's Algebra I Mathematics Content Standards. Detailed correlations to standards for other states are available upon request.

Length: Two Semesters

UNIT 1: REVIEW OF ALGEBRA I-A

LESSON 1: INTEGERS AND OPERATIONS

Study: Integers and Operations
Review sets; subsets; elements; whole numbers; positive and negative integers; the number line; absolute value; arithmetic operations and their properties; and the order of operations.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Properties of Operations
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 28 points
LESSON 2: FRACTIONS AND DECIMALS

Study: Fractions and Decimals
Review fraction terminology (including numerator and denominator); performing operations with fractions; real (rational and irrational) numbers; equivalent fractions; prime numbers and factorization; least common multiples; reciprocals; and converting fractions to decimals and percentages.

Quiz: Like Denominators
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Equivalent Fractions
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 18 points

Quiz: Fractions, Decimals, and Percents
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

LESSON 3: EXPONENTS

Study: Exponents
Review exponents and their place in the order of operations; laws for evaluating exponential expressions; fractional and decimal exponents; radical notation and principal square roots; laws for simplifying radical expressions; and scientific notation.

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins
Quiz: Exponential Expressions
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins*
*Scoring: 30 points*

Quiz: Operations with Radicals
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins*
*Scoring: 16 points*

Quiz: Scientific Notation
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 24 points*

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LESSON 4: VARIABLES AND PROBLEM SOLVING

Study: Variables and Problem Solving
Review variable expressions; mathematical sentences; equations and inequalities; solution sets; and steps to solving algebraic problems.
*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Quiz: Variables and Problem Solving
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins*
*Scoring: 28 points*

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LESSON 5: SOLVING WITH ADDITION AND SUBTRACTION

Study: Solving with Addition and Subtraction
Review isolating variables, using a number line to solve equations and solution sets for inequalities.
*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*
LESSON 6: SOLVING WITH MULTIPLICATION AND DIVISION

Study: Solving with Multiplication and Division
Review solving equations involving multiplication and division, including by using a number line, and review solving inequalities with multiplication and division.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Number Line Tool
Use algebra and a number line tool to solve equations.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Solving Equations with Multiplication
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Solving Equations with Division
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Solving Inequalities with Multiplication and Division
Take a quiz to assess your understanding of the material.
LESSON 7: SOLVING WITH ROOTS AND POWERS

Study: Solving with Roots and Powers
Review solving equations with square roots and absolute values. Review solving inequalities with square roots and absolute values, including by using a number line.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Solving with Roots and Powers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Solving Inequalities with Roots and Powers
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Finding Solution Sets with Inequalities
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

LESSON 8: SOLVING MULTISTEP LINEAR EQUATIONS

Study: Solving Multistep Linear Equations
Review collecting like terms by using both addition/subtraction and multiplication/division and review identifying equations that are never or always true.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Basic Collecting of Like Terms
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 16 points

Quiz: Advanced Collecting of Like Terms
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

Quiz: Finding Number of Solution Sets
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

LESSON 9: REVIEW OF ALGEBRA I-A WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 1 hr Scoring: 100 points

Review: Review of Algebra I-A
Prepare for the unit test by reviewing key concepts and skills.
Duration: 0 hrs 30 mins

Discuss: When Does a Number Become Scientific?
Take part in a discussion about applying methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Review of Algebra I-A
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 105 points

Test (TS): Review of Algebra I-A
Take a teacher-scored test to assess what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 10: DIAGNOSTIC

Diagnostic: Review of Algebra 1-A
Take a diagnostic unit test that will generate a study plan based on your responses.
Duration: 0 hrs 40 mins Scoring: 35 points
UNIT 2: GRAPHING DATA

LESSON 1: THE CARTESIAN COORDINATE SYSTEM

Study: The Cartesian Coordinate System
Identify and define parts of the Cartesian coordinate system, such as the axes, the origin, and the four quadrants.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: The Cartesian Coordinate System
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

LESSON 2: GEOMETRY WITH COORDINATES

Study: Geometry with Coordinates
Learn about using geometry with the coordinate system to find lengths of line segments; distances between points; perimeters; and even areas in the xy-plane.
Duration: 0 hrs 50 mins

Practice: Graphing Tool
Use a graphing tool to draw line segments and investigate distance.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Geometry with Coordinates
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 3: THE DISTANCE FORMULA

Study: The Distance Formula
Learn about deriving the distance formula for the xy-plane.
Duration: 0 hrs 10 mins
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: The Distance Formula
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring:
24 points

LESSON 4: DATA ANALYSIS

Study: Data Analysis
Learn about using the Cartesian coordinate system to find patterns in data; plotting points on a graph; dependent and independent variables; converting table data to ordered pairs; and using the best-fit line to estimate the value of data points.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Graphing Tool
Use a graphing tool to find best-fit lines and use them to make predictions.

Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Data Analysis
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 18 points

LESSON 5: GRAPHING DATA WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Graphing Data
Prepare for the unit test by reviewing key concepts and skills.

Duration: 0 hrs 30 mins

Discuss: You Are Here
Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hrs 20 mins Scoring: 30 points*

**Test (CS): Graphing Data**
Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hrs 40 mins Scoring: 45 points*

**Test (TS): Graphing Data**
Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hrs 30 mins Scoring: 50 points*

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**LESSON 6: DIAGNOSTIC**

**Diagnostic: Graphing Data**
Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hrs 40 mins Scoring: 15 points*

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**UNIT 3: LINEAR EQUATIONS**

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**LESSON 1: PATTERNS AND LINES**

**Study: Patterns and Lines**
Explore a variety of functional relationships involving direct variation. Get an introduction to lines by examining the connection between the pattern of points on the graph of a line and the line's equation. Find the equation of a line based on the coordinates of its points and graph a linear equation from a chart of its solutions.

*Duration: 0 hrs 50 mins*

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hrs 30 mins*

**Quiz: Finding Equations of Lines as Solutions**
Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 25 mins Scoring: 30 points*
LESSON 2: SLOPE

Study: Slope
Learn about slope formula, the definition of rise and run, and measuring rate of change.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Graphing Tool
Use a graphing tool to investigate slope.

Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Finding Slopes of Lines
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 30 points

Quiz: Positive, Negative, and Undefined Slopes
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 24 points

LESSON 3: PARALLEL AND PERPENDICULAR LINES

Study: Parallel and Perpendicular Lines
Learn about parallel and perpendicular lines and the relationships between their slopes.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Slopes of Parallel and Perpendicular Lines
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 4: SLOPE-INTERCEPT EQUATION OF A LINE
LESSON 5: POINT-SLOPE EQUATION OF A LINE

Study: Point-Slope Equation of a Line
Learn about using slope and a point to find the $y$-intercept of a line; deriving and using the point-slope equation; and the standard form of an equation. Complete an application problem involving a mass on a spring.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Finding the Point-Slope Equation
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Finding the Equations of Lines
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 22 points

LESSON 6: LINEAR INEQUALITIES
Study: Linear Inequalities
Learn about finding and graphing solution sets for linear inequalities.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Graphs of Inequalities
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 18 points

Study: Solving the Lighting Problem
Learn about applying linear inequalities in order to solve the real-world problem comparing energy usage of incandescent and fluorescent lightbulbs.

Duration: 0 hrs 50 mins

LESSON 7: LINEAR EQUATIONS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Linear Equations
Prepare for the unit test by reviewing key concepts and skills.

Duration: 0 hrs 30 mins

Discuss: A Slippery Slope
Take part in a three- to five-question discussion about applying methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Linear Equations
Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 57 points

Test (TS): Linear Equations
Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 8: DIAGNOSTIC

Core > Algebra I-B
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Diagnostic: Linear Equations
Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hrs 40 mins Scoring: 19 points

UNIT 4: SYSTEMS OF LINEAR EQUATIONS

LESSON 1: TWO-VARIABLE SYSTEMS: GRAPHING

Study: Two-Variable Systems: Graphing
Learn about graphing systems of two linear equations and investigating when and why systems of linear equations have no solutions, exactly one solution, or infinitely many solutions.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Graphing Tool
Use a graphing tool to investigate two-variable systems.

Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Solving with Graphing
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 2: TWO-VARIABLE SYSTEMS: SUBSTITUTION

Study: Two-Variable Systems: Substitution
Learn about replacing a variable with an equal value or expression in order to transform a two-variable equation into a one-variable equation. Learn about using the substitution method to solve systems of linear equations and about applying this method to the real-world problem of a rabbit catching a turtle.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins
LESSON 3: TWO-VARIABLE SYSTEMS: ELIMINATION

Study: Two-Variable Systems: Elimination
Strategize methods for eliminating a variable term when solving a system of linear equations. Practice adding or subtracting the same value from both sides of an equation in order to eliminate strategic terms. Change equations from nonstandard form to standard form so that they are easier to work with and adapt to the elimination method.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Solving with Elimination  Standard Form
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Solving with Elimination  Nonstandard Form
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 26 points

LESSON 4: TWO-VARIABLE SYSTEMS OF INEQUALITIES

Study: Two-Variable Systems of Inequalities
Learn about graphing and finding solution sets for systems of inequalities, including those with no solution and those with more than two inequalities.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Graphing Tool
Use a graphing tool to investigate two-variable systems of inequalities.

Duration: 0 hrs 40 mins
LESSON 5: SYSTEMS OF LINEAR EQUATIONS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 1 hr Scoring: 100 points

Review: Systems of Linear Equations
Prepare for the unit test by reviewing key concepts and skills.
Duration: 0 hrs 30 mins

Discuss: What's the Solution?
Take part in a three- to five-question discussion about applying methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Systems of Linear Equations
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 51 points

Test (TS): Systems of Linear Equations
Take a teacher-scored test to assess what you have learned in this unit.
Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 6: DIAGNOSTIC

Diagnostic: Systems of Linear Equations
Take a diagnostic unit test that will generate a study plan based on your responses.
Duration: 0 hrs 40 mins Scoring: 17 points
UNIT 5: ALGEBRA I-B SEMESTER 1 WRAP-UP

LESSON 1: ALGEBRA I-B SEMESTER 1

Review: Algebra I-B Semester 1
Prepare for the semester exam by reviewing key concepts covered in Algebra I-B Semester 1.

Duration: 1 hr

Exam: Algebra I-B Semester 1

Duration: 0 hrs 50 mins Scoring: 200 points

UNIT 6: POLYNOMIALS

LESSON 1: WHAT IS A MONOMIAL?

Study: What Is a Monomial?
Explore the world of monomials.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Algebra Tiles Tool
Use an algebra tiles tool to investigate monomials.

Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: What Is a Monomial?
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 20 points

LESSON 2: WHAT IS A POLYNOMIAL?

Study: What Is a Polynomial?
Learn the definitions of polynomials, constants, terms, coefficients, binomials, trinomials, and degrees. Learn about finding degrees of polynomials.
LES SSON 3: ADDING AND SUBTRACTING POLYNOMIALS

Study: Adding and Subtracting Polynomials
Learn about using tiles to represent, add, and subtract polynomials and about adding and subtracting polynomials by collecting like terms. Apply these methods to the real-world problem of purchasing streetlamps.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Polynomial Addition with Tiles
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 30 points

Quiz: Polynomial Addition
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

Quiz: Polynomial Subtraction
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 16 points
LESSON 4: MULTIPLYING BINOMIALS

Study: Multiplying Binomials
Learn about using tiles to multiply linear binomials; using the distributive property to simplify and find the product of two binomials; and the FOIL (first, outer, inner, last) method of finding products.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Finding Products of Binomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 28 points

Quiz: Finding the Product of Two Binomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 30 points

Quiz: The FOIL Method
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 16 points

LESSON 5: MULTIPLYING POLYNOMIALS

Study: Multiplying Polynomials
Learn about using a table to multiply polynomials; using the distributive property; and multiplying polynomials by arranging them vertically.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Polynomial Multiplication
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 22 points

Quiz: Polynomial Multiplication (Advanced)
LESSON 6: DIVIDING POLYNOMIALS

Study: Dividing Polynomials
Learn about dividing polynomials by monomials.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Algebra Tiles Tool
Use an algebra tiles tool to investigate dividing polynomials.
Duration: 0 hrs 40 mins
Scoring: 25 points

Quiz: Polynomial Division
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 7: POLYNOMIALS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
Duration: 1 hr Scoring: 100 points

Review: Polynomials
Prepare for the unit test by reviewing key concepts and skills.
Duration: 0 hrs 30 mins

Discuss: Thinking Positive in the Real World
Take part in a three- to five-question discussion about applying methods learned in this unit.
Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Polynomials
Take a computer-scored test to assess what you have learned in this unit.
Duration: 0 hrs 40 mins Scoring: 75 points
Test (TS): Polynomials
Take a teacher-scored test to assess what you have learned in this unit.
Duration: 0 hrs 30 mins
Scoring: 50 points

LESSON 8: DIAGNOSTIC

Diagnostic: Polynomials
Take a diagnostic unit test that will generate a study plan based on your responses.
Duration: 0 hrs 40 mins Scoring: 25 points

UNIT 7: FACTORING OF POLYNOMIALS

LESSON 1: WHY FACTOR?

Study: Why Factor?
Learn about composite numbers, reducible polynomials, and the zero product rule.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring Polynomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 2: FACTORING WITH TILES

Study: Factoring with Tiles
Review using tiles to multiply polynomials and to find factors of polynomials.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins
Practice: Algebra Tiles Tool
Use an algebra tiles tool to investigate perfect-square polynomials.
Duration: 0 hrs 40 mins
Scoring: 25 points

Quiz: Factoring Polynomials with Tiles
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins
Scoring: 24 points

LESSON 3: FACTORING AND GRAPHING

Study: Factoring and Graphing
Learn about the connection between roots and linear factors; using roots on graphs of polynomials to find linear factors; and polynomials with no linear factors or repeated linear factors.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Graphing Tool and Algebra Tiles Tool
Use a graphing tool and an algebra tiles tool to investigate factoring and graphing.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Factoring by Graphing
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring:
28 points

Quiz: Factoring by Graphing (Advanced)
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring:
22 points

LESSON 4: GROUPING

Study: Grouping
Learn about polynomials with terms that have a common factor; applying the distributive property in reverse to factor out common factors; and finding the greatest common factor.
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Factoring by Grouping
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Finding GCFs of Polynomials
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 16 points

LESSON 5: FACTORING OF POLYNOMIALS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Factoring of Polynomials
Take part in interactive games to review unit material in preparation for upcoming assessments.

Duration: 0 hrs 30 mins

Discuss: Factoring of Polynomials
Take part in a three- to five-question discussion about applying methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points

Test (CS): Factoring of Polynomials
Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 75 points

Test (TS): Factoring of Polynomials
Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

LESSON 6: DIAGNOSTIC
Diagnostic: Factoring of Polynomials
Take a diagnostic unit test that will generate a study plan based on your responses.

**UNIT 8: FACTORING OF QUADRATIC EXPRESSIONS**

**LESSON 1: FACTORING** \( x^2 + bx + c \)

**Study: Factoring** \( x^2 + bx + c \)
Learn about factoring quadratic trinomials with leading coefficients of 1; the rules for finding the constant term and coefficient of the \( x \)-term; using a table to factor trinomials; and diagramming signs while factoring trinomials.

*Duration: 0 hrs 50 mins*

**Checkup: Practice Problems**
Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hrs 30 mins*

**Practice: Graphing Tool**
Use a graphing tool to investigate quadratic functions with no leading coefficient.

*Duration: 0 hrs 40 mins Scoring: 25 points*

**Quiz: Binomial Factors of Trinomials**
Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 25 mins Scoring: 30 points*

**Quiz: Factoring Trinomials**
Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 25 mins Scoring: 30 points*

**LESSON 2: FACTORING** \( ax^2 + bx + c \)

**Study: Factoring** \( ax^2 + bx + c \)
Learn about factoring trinomials with leading coefficients other than 1; factoring out a leading coefficient of -1; how values of factors relate to values of a trinomial; finding factor pairs of leading coefficients and constant terms; and finding signs in factors of trinomials with a leading coefficient different from 1.

*Duration: 0 hrs 50 mins*
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Practice: Quadratic Factoring Tool
Use a quadratic factoring tool to investigate quadratic functions with a leading coefficient.
*Duration: 0 hrs 40 mins Scoring: 25 points*

Quiz: Factoring Trinomials (Basic)
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*

Quiz: Factoring Trinomials (Advanced)
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*

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LESSON 3: SPECIAL CASES

Study: Special Cases
Learn about recognizing and factoring a difference of squares; perfect-square trinomials; and sums and differences of two cubes.
*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Quiz: Factoring a Difference of Squares
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*

Quiz: Factoring Perfect Square Trinomials
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 20 points*

Quiz: Sum or Difference of Two Cubes
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*
LESSON 4: SOLVING QUADRATIC EQUATIONS

Study: Solving Quadratic Equations
Learn about solving quadratic equations using factoring and the zero product rule; manipulating a quadratic equation into standard form; and solving quadratic equations with perfect-square trinomials.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Factoring with the Zero Product Rule
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

Quiz: Converting Quadratics to Standard Form
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 28 points

Quiz: Quadratics with Perfect Square Trinomials
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 16 points

LESSON 5: THE QUADRATIC FORMULA

Study: The Quadratic Formula
Learn about types of equations that can be solved using the quadratic formula; complex numbers; discriminants; and finding roots (including complex roots) using the quadratic formula.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Quiz: Complex Numbers and Discriminants
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: The Quadratic Formula
LES S S 6: GRAPHS OF QUADRATIC FUNCTIONS

Study: Graphs of Quadratic Functions
Relate factors of a quadratic function to the graph of a parabola and its corresponding x-intercepts. Locate the vertex of a quadratic function graphically and algebraically. Use the discriminant of the quadratic formula to identify the number and types of solutions to a given quadratic equation, as well as to visualize its corresponding graph.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Graphs of Quadratic Functions
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 30 points

Quiz: Working with the Discriminant
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins
Scoring: 20 points

LES S S 7: FACTORING OF QUADRATIC EXPRESSIONS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.

Duration: 1 hr Scoring: 100 points

Review: Factoring of Quadratic Functions
Prepare for the unit test by reviewing key concepts and skills.

Duration: 0 hrs 30 mins

Discuss: Factoring of Quadratic Functions
Take part in a three- to five-question discussion about applying methods learned in this unit.

Duration: 0 hrs 20 mins Scoring: 30 points
Test (CS): Factoring of Quadratic Functions
Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hrs 40 mins Scoring: 75 points*

Test (TS): Factoring of Quadratic Functions
Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hrs 30 mins Scoring: 50 points*

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LESSON 8: DIAGNOSTIC

Diagnostic: Factoring of Quadratic Functions
Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hrs 40 mins Scoring: 25 points*

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UNIT 9: RATIONAL EXPRESSIONS

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LESSON 1: PROPORTIONS

Study: Proportions
Learn the definition of a rational expression and learn about using proportional reasoning to solve problems. Explore real-world examples of proportional reasoning.

*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hrs 30 mins*

Practice: Proportion Builder Tool
Use a proportion builder tool to investigate proportions.

*Duration: 0 hrs 40 mins
Scoring: 25 points*

Quiz: Proportions
Take a quiz to assess your understanding of the material.

*Duration: 0 hrs 25 mins Scoring: 16 points*

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LESSON 2: RATIONAL EXPRESSIONS
Study: Rational Expressions
Learn about finding the value of a rational expression and about undefined rational expressions.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Practice: Rational Expressions Tool
Use a rational expressions tool to investigate rational expressions.

Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Rational Expressions
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 16 points

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LESSON 3: SIMPLIFYING RATIONAL EXPRESSIONS

Study: Simplifying Rational Expressions
Practice finding and dividing out common factors in numerators and denominators of rational expressions. Explore the crucial difference between common factors and terms.

Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.

Duration: 0 hrs 30 mins

Quiz: Simplifying Rational Expressions
Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 16 points

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LESSON 4: ADVANCED PROPORTIONS

Study: Advanced Proportions
Learn how to solve more advanced proportions and explore real-world scenarios that require advanced proportional reasoning.

Duration: 0 hrs 50 mins
Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Quiz: Advanced Proportions
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 20 points*

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LESSON 5: RATIONAL EXPRESSIONS WRAP-UP

Practice: Assignment
Submit your work for a set of 20 practice problems.
*Duration: 1 hr Scoring: 100 points*

Review: Rational Expressions
Prepare for the unit test by reviewing key concepts and skills.
*Duration: 0 hrs 30 mins*

Discuss: Undefined and Infinite Numbers
Take part in a three- to seven-question discussion about applying methods learned in this unit.
*Duration: 0 hrs 20 mins Scoring: 30 points*

Test (CS): Rational Expressions
Take a computer-scored test to assess what you have learned in this unit.
*Duration: 0 hrs 40 mins Scoring: 75 points*

Test (TS): Rational Expressions
Take a teacher-scored test to assess what you have learned in this unit.
*Duration: 0 hrs 30 mins Scoring: 50 points*

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LESSON 6: DIAGNOSTIC

Diagnostic: Rational Expressions
Take a diagnostic unit test that will generate a study plan based on your responses.
*Duration: 0 hrs 40 mins Scoring: 25 points*

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UNIT 10: RADICAL EXPRESSIONS
LESSON 1: BASICS OF RADICALS

Study: Basics of Radicals
Learn the definition of radical expression. Explore simplifying the product and quotient of radicals and simplifying individual radicals.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Radical Expressions Tool
Use a radical expressions tool to investigate the basics of radicals.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Simplifying Products of Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

Quiz: Simplifying Quotients of Radicals
Take a quiz to assess your understanding of the material.
Duration: 0 hrs 25 mins Scoring: 30 points

LESSON 2: MULTIPLYING AND DIVIDING RADICALS

Study: Multiplying and Dividing Radicals
Learn about multiplying and dividing radical expressions that include variables and about using the FOIL (first, inner, outer, last) method to simplify radical expressions.
Duration: 0 hrs 50 mins

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
Duration: 0 hrs 30 mins

Practice: Radical Values Tool
Use a radical values tool to investigate multiplying and dividing radicals.
Duration: 0 hrs 40 mins Scoring: 25 points

Quiz: Multiplying Radicals
Take a quiz to assess your understanding of the material.
LESSON 3: ADDING AND SUBTRACTING RADICALS

Study: Adding and Subtracting Radicals
Learn about adding and subtracting radical expressions by combining like terms and about simplifying terms to get the same radicand.
*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Quiz: Adding and Subtracting Radicals
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*

LESSON 4: RATIONALIZING DENOMINATORS

Study: Rationalizing Denominators
Learn about rationalizing a denominator in order to simplify a fraction with a radical expression in the denominator. Learn about multiplying by the conjugate of a denominator.
*Duration: 0 hrs 50 mins*

Checkup: Practice Problems
Complete a set of practice problems to hone your calculation skills.
*Duration: 0 hrs 30 mins*

Quiz: Rationalizing Denominators
Take a quiz to assess your understanding of the material.
*Duration: 0 hrs 25 mins Scoring: 30 points*

LESSON 5: RADICAL EXPRESSIONS WRAP-UP
Practice: Assignment
Submit your work for a set of 20 practice problems.
*Duration: 1 hr*  
*Scoring: 100 points*

Review: Radical Expressions
Prepare for the unit test by reviewing key concepts and skills.
*Duration: 0 hrs 30 mins*

Discuss: Rooting Out Squares and Cubes
Take part in a three- to seven-question discussion about applying methods learned in this unit.
*Duration: 0 hrs 20 mins*  
*Scoring: 30 points*

Test (CS): Radical Expressions
Take a computer-scored test to assess what you have learned in this unit.
*Duration: 0 hrs 40 mins*  
*Scoring: 75 points*

Test (TS): Radical Expressions
Take a teacher-scored test to assess what you have learned in this unit.
*Duration: 0 hrs 30 mins*  
*Scoring: 50 points*

LESSON 6: DIAGNOSTIC

Diagnostic: Radical Expressions
Take a diagnostic unit test that will generate a study plan based on your responses.
*Duration: 0 hrs 40 mins*  
*Scoring: 25 points*

UNIT 11: ALGEBRA I-B SEMESTER 2 WRAP-UP

LESSON 1: ALGEBRA I-B SEMESTER 2

Review: Algebra I-B Semester 2
Prepare for the semester exam by reviewing key concepts covered in Algebra I-B Semester 2.
*Duration: 1 hr*

Exam: Algebra I-B Semester 2
*Duration: 0 hrs 50 mins*  
*Scoring: 200 points*