

California's Algebra I-A and I-B courses address the need for an expanded, two-year treatment of traditional high school Algebra I curriculum. Focusing on review of pre-algebra skills and introductory algebra content, Algebra I-A allows students to deepen their understanding of real numbers in their various forms and then extend their knowledge to linear equations in one and two variables. Course topics include integers; the language of algebra; fractions and decimals; exponents; solving equations with four basic operations; solving equations with roots, powers, or multiple steps; functions; and linear equations.

Algebra I-A 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-A includes audio resources in both Spanish and English.

When used together, Algebra I-A and Algebra I-B meet California's Algebra I Mathematics Content Standards.

Length: Two Semesters

## UNIT 1: INTEGERS

---

### LESSON 1: WHOLE NUMBERS

#### Study: Whole Numbers

Learn about aspects of whole numbers, including place value, natural numbers, sets, elements, and set notation.

*Duration: 0 hr 40 min*

#### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### Quiz: Whole Numbers

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

### LESSON 2: NUMBER LINES AND INEQUALITIES

**Study: Number Lines and Inequalities**

Define and use a number line. Represent relationships between numbers with inequality symbols.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Number Lines and Inequalities**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 3: ROUNDING WHOLE NUMBERS****Study: Rounding Whole Numbers**

Explore rounding and estimating numbers with and without a number line.

*Duration:*

*0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Rounding with a Number Line**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

**Quiz: Rounding without a Number Line**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 4: OPERATIONS AND NUMERICAL EXPRESSIONS****Study: Operations and Numerical Expressions**

Learn about forming and evaluating numerical expressions, the order of operations, and grouping symbols.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

---

*Duration: 0 hr 20 min*

### **Quiz: Operations and Numerical Expressions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## **LESSON 5: PROPERTIES OF OPERATIONS**

### **Study: Properties of Operations**

Learn about the associative, commutative, and distributive properties of addition and multiplication.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: The Associative Property**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: The Commutative and Distributive Properties**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 6: THE OPERATIONS ON A NUMBER LINE**

### **Study: The Operations on a Number Line**

Explore using a number line to evaluate numerical expressions.

*Duration: 0*

*hr 40 min*

---

## **LESSON 7: REVERSE OPERATIONS**

### **Study: Reverse Operations**

Learn about addition, subtraction, multiplication, and division as reverse operations.

*Duration: 0 hr 40 min*

---

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Reverse Operations**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 8: NEGATIVE NUMBERS****Study: Negative Numbers**

Learn about positive, negative, and opposite numbers, as well as integers and signs.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Negative Numbers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 9: ABSOLUTE VALUE****Study: Absolute Value**

Learn about the absolute value of integers, the definition symbol, and the absolute value of expressions.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Absolute Value**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

**LESSON 10: ADDING INTEGERS**

**Study: Adding Integers**

Learn about adding integers with and without a number line.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Adding Integers (Basic)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

**Quiz: Adding Integers (Advanced)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 11: SUBTRACTING INTEGERS****Study: Subtracting Integers**

Learn about subtracting negative integers by using a number line and by adding the opposite number (calculating).

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Subtracting Integers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 12: MULTIPLYING INTEGERS****Study: Multiplying Integers**

Learn the rules for multiplying a positive and negative integer and for multiplying two negative integers.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

---

### **Quiz: Multiplying Integers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 13: DIVIDING INTEGERS**

### **Study: Dividing Integers**

Learn the rules for dividing a positive and negative integer and for dividing two negative integers.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Dividing Integers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 14: WRAP-UP**

### **Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

### **Review: Integers**

Review unit material in preparation for upcoming assessments.

*Duration: 0 hr 30 min*

### **Discuss: Consistency is Key**

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### **Test (CS): Integers**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

*Scoring: 75 points*

### **Test (TS): Integers**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

---

Scoring: 50 points

---

## LESSON 15: DIAGNOSTIC

### Diagnostic: Integers

Take a diagnostic unit test that will generate a study plan based on your responses.

Duration: 0 hr

30 min Scoring: 25 points

## UNIT 2: THE LANGUAGE OF ALGEBRA

---

### LESSON 1: WHAT IS A VARIABLE?

#### Study: What is a Variable?

Learn the definition and explore examples of variables.

Duration: 0 hr 40 min

#### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hr 20 min

#### Quiz: What is a Variable?

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min Scoring: 12

points

---

### LESSON 2: FINDING AND NAMING VARIABLES

#### Study: Finding and Naming Variables

Select relevant variables and name them.

Duration: 0 hr 40 min

#### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

Duration: 0 hr 20 min

#### Quiz: Finding and Naming Variables

Take a quiz to assess your understanding of the material.

Duration: 0 hr 15 min

Scoring: 12 points

---

## LESSON 3: UNITS AND REASONABLE VALUES

### Study: Units and Reasonable Values

Learn to recognize units of measure and determine reasonable values.

*Duration:*

*0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Units and Reasonable Values

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

## LESSON 4: GRAPHS TABLES AND EQUATIONS

### Study: Graphs, Tables, and Equations

Find the value of a variable using graphs, tables, and equations. Learn to organize information and find patterns. Explore examples and advantages of each problem-solving method.

*Duration: 0 hr*

*40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Graphs, Tables, and Equations

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

## LESSON 5: SOLVING PROBLEMS WITH TABLES AND GRAPHS

### Study: Solving Problems with Tables and Graphs

Set up tables and graphs and use them to organize information. Determine when to use tables and graphs to solve problems.

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

---



### Quiz: Solving Problems with Tables and Graphs

Take a quiz to assess your understanding of the material.

*Duration: 0*

*hr 15 min Scoring: 12 points*

---

## LESSON 6: VARIABLE EXPRESSIONS

### Study: Variable Expressions

Define and form variable expressions by performing operations.

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Variable Expressions

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## LESSON 7: SIMPLIFYING AND EVALUATING EXPRESSIONS

### Study: Simplifying and Evaluating Expressions

Simplify variable expressions by evaluating their numerical parts.

Evaluate variable expressions by substituting values for  $x$ .

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Simplifying and Evaluating Expressions

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## LESSON 8: MATHEMATICAL SENTENCES

### Study: Mathematical Sentences

Learn about the types and parts of mathematical sentences. Learn about translating word problems into mathematical sentences.

*Duration: 0 hr 40 min*

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Mathematical Sentences**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

---

**LESSON 9: SOLVING MATHEMATICAL SENTENCES****Study: Solving Mathematical Sentences**

Solve equations using the "guess-and-check" method. Define a solution set and compare solution sets of equations and inequalities.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving Mathematical Sentences**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 10: SOME GUIDELINES FOR PROBLEM SOLVING****Study: Some Guidelines for Problem Solving**

Use problem-solving tips to solve a problem. Develop a general strategy for solving problems.

*Duration: 0 hr 40 min*

**Quiz: Some Guidelines for Problem Solving**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

**LESSON 11: DEDUCTIVE REASONING****Study: Deductive Reasoning**

Learn the definition of deductive reasoning. Practice making conclusions and deducing which statements in a problem are true. Practice these skills using sample problems.

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

*Duration: 0 hr 25 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Deductive Reasoning**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 12: INDUCTIVE REASONING**

**Study: Inductive Reasoning**

Explore inductive reasoning and using induction to continue a pattern. Practice these skills using sample problems.

*Duration: 0 hr 25 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Inductive Reasoning**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 13: WRAP-UP**

**Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

**Review: The Language of Algebra**

Review unit material in preparation for upcoming assessments.

*Duration: 0 hr 30 min*

**Discuss: Using X to Mark the Spot**

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

**Test (CS): The Language of Algebra**

Take a computer-scored test to assess what you have learned in this unit.

---

*Duration: 0 hr 30 min Scoring: 75 points*

### **Test (TS): The Language of Algebra**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration:*

*0 hr 30 min Scoring: 50 points*

---

## **LESSON 14: DIAGNOSTIC**

### **Diagnostic: The Language of Algebra**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hr 30 min Scoring: 25 points*

## **UNIT 3: FRACTIONS AND DECIMALS**

---

### **LESSON 1: FRACTION FUNDAMENTALS**

#### **Study: Fraction Fundamentals**

Learn about fractions, numerators, denominators, and equivalent fractions.

*Duration: 0*

*hr 40 min*

#### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### **Quiz: Fractional Amounts**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

#### **Quiz: Equivalent Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

### **LESSON 2: INTRODUCTION TO FRACTION ARITHMETIC**

#### **Study: Introduction to Fraction Arithmetic**

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Learn about adding and subtracting fractions with like denominators, multiplying a fraction by an integer, and multiplying fractions.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Adding and Subtracting Like Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

**Quiz: Multiplying Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 3: EQUIVALENT FRACTIONS**

**Study: Equivalent Fractions**

Learn about building equivalent fractions in order to add and subtract fractions with unlike denominators. Learn about comparing equivalent fractions.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Adding and Subtracting Unlike Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0*

*hr 15 min Scoring: 12 points*

**Quiz: Comparing Unlike Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 4: SIMPLIFYING FRACTIONS**

**Study: Simplifying Fractions**

Learn about finding common factors; dividing numerators and denominators by a common factor in order to simplify a fraction; putting a fraction in lowest terms; prime and composite numbers; and using a factor tree

---

to find prime factorization.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Finding Common Denominators**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Dividing by Common Factors**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Simplifying Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

### **Quiz: Prime and Composite Numbers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Prime Factorization**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## **LESSON 5: MIXED NUMBERS**

### **Study: Mixed Numbers**

Learn about proper and improper fractions, writing improper fractions as mixed numbers, and converting mixed numbers to improper fractions.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Converting Improper Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Converting Mixed Numbers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

## **LESSON 6: DIVIDING FRACTIONS**

### **Study: Dividing Fractions**

Learn the definition of reciprocals. Learn about finding reciprocals of fractions in order to divide them.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Finding Reciprocals**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

### **Quiz: Dividing Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## **LESSON 7: ADDING AND SUBTRACTING FRACTIONS**

### **Study: Adding and Subtracting Fractions**

Learn about the smallest common denominator (the least common multiple of denominators) and about using prime factorization to find the least common multiple.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Adding and Subtracting Unlike Fractions**

Take a quiz to assess your understanding of the material.

*Duration: 0*

*hr 15 min Scoring: 12 points*

### **Quiz: Solving Equations with Fractions**

Take a quiz to assess your understanding of the material.

---

*Duration: 0 hr 15  
min Scoring: 12 points*

---

## LESSON 8: DECIMALS AND PERCENTS

### **Study: Decimals and Percents**

Learn about place value in integers and decimals, terminating and repeating decimals, finding decimal equivalents of fractions, and converting decimals to percents. Explore real-world examples of how to use percentages.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Converting Fractions to Decimals**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

### **Quiz: Converting Percents to Decimals**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

## LESSON 9: THE SET OF RATIONAL NUMBERS

### **Study: The Set of Rational Numbers**

Learn about rational and irrational numbers and pi.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Rational Numbers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## LESSON 10: APPLICATIONS OF PERCENTAGES



### **Study: Applications of Percentages**

Learn about a variety of applications of percentages, including increase, decrease, and interest.

*Duration: 0 hr 40 min*

### **Practice: Applications of Percentages**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 30 min*

*Scoring: 25 points*

---

## **LESSON 11: WRAP-UP**

### **Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

### **Review: Fractions and Decimals**

Review unit material in preparation for upcoming assessments.

*Duration: 0 hr 30 min*

### **Discuss: Pieces of a Whole**

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### **Test (CS): Fractions and Decimals**

Take a computer-scored test to assess what you have learned in this unit.

*Duration:*

*0 hr 30 min Scoring: 75 points*

### **Test (TS): Fractions and Decimals**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0*

*hr 30 min Scoring: 50 points*

---

## **LESSON 12: DIAGNOSTIC**

### **Diagnostic: Fractions and Decimals**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hr 30 min Scoring: 25 points*

## **UNIT 4: EXPONENTS**

---

## LESSON 1: DEFINITIONS AND EXAMPLES OF EXPONENTS

### Study: Definitions and Examples of Exponents

Learn the definitions of base, exponent, power, and exponential expression. Learn to use a table to illustrate real-world applications of exponents.

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Definitions and Examples of Exponents

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## LESSON 2: EXPONENTS AND THE ORDER OF OPERATIONS

### Study: Exponents and the Order of Operations

Learn about evaluating expressions with exponents using the order of operations.

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### Quiz: Exponents and the Order of Operations

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## LESSON 3: LAWS OF EXPONENTS

### Study: Laws of Exponents

Learn about the multiplication law of exponents with positive and negative exponents; the rule for negative exponents; the division law of exponents; raising products and fractions to a power; and the power rule of exponents.

*Duration: 0 hr 40 min*

### Checkup: Practice Problems

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

---

**Quiz: The Multiplication Law of Exponents**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

**Quiz: Zero and Negative Exponents**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

**Quiz: The Division Law of Exponents**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

**Quiz: Raising Products and Fractions to a Power**

Take a quiz to assess your understanding of the material.

*Duration:*

*0 hr 15 min Scoring: 12 points*

**Quiz: The Power Rule of Exponents**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 4: SCIENTIFIC NOTATION****Study: Scientific Notation**

Learn about expressing large numbers using scientific notation and about the form of scientific notation. Explore examples from elementary science.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Scientific Notation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 5: EXPONENTS IN GEOMETRY****Study: Exponents in Geometry**

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Learn about using exponents to represent area and volume formulae. Explore units of area and volume.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Exponents in Geometry**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

---

**LESSON 6: SQUARE ROOTS**

**Study: Square Roots**

Learn about fractional exponents; principal square roots; square roots of positive numbers; perfect squares; and negative square roots vs. square roots of negative numbers.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Square Roots**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

**LESSON 7: RADICAL NOTATION**

**Study: Radical Notation**

Learn about radical signs and radicands. Explore laws of exponents that apply to radicals.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Radical Notation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## LESSON 8: WRAP-UP

### Practice: Assignment

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

### Review: Exponents

Review unit material in preparation for upcoming assessments.

*Duration: 0 hr 30 min*

### Discuss: Thinking Big with Exponents

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### Test (CS): Exponents

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

*Scoring: 75 points*

### Test (TS): Exponents

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

*Scoring: 50 points*

---

## LESSON 9: DIAGNOSTIC

### Diagnostic: Exponents

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0*

*hr 30 min Scoring: 25 points*

## UNIT 5: ALGEBRA 1A SEMESTER 1 WRAP-UP

---

## LESSON 1: ALGEBRA 1A SEMESTER 1

### Review: Algebra 1A Semester 1

*Duration: 1 hr*

### Exam: Algebra 1A Semester 1

*Duration: 0 hr 50 min Scoring: 200 points*

---

Core > California Algebra I-A

Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.

## UNIT 6: SOLVING EQUATIONS WITH FOUR BASIC OPERATIONS

---

### LESSON 1: SOLVING EQUATIONS GRAPHICALLY

#### **Study: Solving Equations Graphically**

Begin solving basic equations by using an interactive scale tool. Discover problem-solving strategies such as isolating a variable in an equation and using tiles on a scale to represent values in word problems.

*Duration: 0 hr 40 min*

#### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### **Quiz: Solving Equations Graphically**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

### LESSON 2: SOLVING EQUATIONS WITH LARGER NUMBERS

#### **Study: Solving Equations with Larger Numbers**

Translate a word problem involving large numbers into a mathematical sentence (or equation) and use an interactive scale tool to solve for the variable.

*Duration: 0 hr 40 min*

#### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### **Quiz: Solving Equations with Larger Numbers**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

### LESSON 3: SOLVING $x + a = b$

#### **Study: Solving $x + a = b$**

Practice solving equations in the form  $x + a = b$  by isolating the variable  $x$  on one side of the equation. Learn how to solve this type of equation when the value of  $a$  is positive or negative.

*Duration: 0 hr 40 min*

---

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving  $x + a = b$** 

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

**Quiz: Solving  $x - a = b$** 

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 4: SOLVING WITH A NUMBER LINE****Study: Solving with a Number Line**

Plot points on a number line, moving to the left or right to solve equations.

*Duration:*

*0 hr 40 min*

---

**LESSON 5: SOLVING INEQUALITIES****Study: Solving Inequalities**

Develop strategies to solve various forms of inequalities and display their solution set on a number line.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving Inequalities**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 6: VARIATIONS OF EQUATIONS AND INEQUALITIES****Study: Variations of Equations and Inequalities**

Explore problems that take different forms. Rearrange equations into standard form,  $x + a = b$ , and solve inequalities in nonstandard form.

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Equations in Nonstandard Form**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

**Quiz: Inequalities in Nonstandard Form**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

---

**LESSON 7: SOLVING  $AX = B$**

**Study: Solving  $ax = b$**

Learn about setting up a table; writing an equation to express a pattern; isolating a variable; dividing by the coefficient of a variable; and using a number line to solve equations in standard form.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving  $ax = b$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

**LESSON 8: THE LIGHTNING PROBLEM**

**Study: The Lightning Problem**

Apply the rate formula for distance to determine how far away a thunderstorm is, based on the time delay between seeing lightning and hearing thunder.

*Duration: 0 hr 40 min*

---

**LESSON 9: SOLVING  $X/A = B$**

**Study: Solving  $x/a = b$**

Learn about solving division problems by using multiplication.

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*



*Duration: 0 hr 40 min*

**Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving  $x/a = b$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

**LESSON 10: INEQUALITIES**

**Study: Inequalities**

Learn about solving inequalities by dividing by the coefficient of a variable. Learn about multiplying and dividing inequalities by negative numbers.

*Duration: 0 hr 40 min*

**Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving Inequalities with Division**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

**Quiz: Solving Inequalities with Multiplication**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

**LESSON 11: SOLVING EQUATIONS WITH FOUR BASIC OPERATIONS WRAP-UP**

**Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

**Review: Solving Equations with Four Basic Operations**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hr 30 min*

**Discuss: Math — The Ultimate Balancing Act**

Take part in a three- to five-question discussion about applying methods

---

learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### **Test (CS): Solving Equations with Four Basic Operations**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 75 points*

### **Test (TS): Solving Equations with Four Basic Operations**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 50 points*

---

## **LESSON 12: DIAGNOSTIC**

### **Diagnostic: Solving Equations with Four Basic Operations**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hr 30 min Scoring: 25 points*

## **UNIT 7: SOLVING EQUATIONS WITH ROOTS, POWERS, OR MULTIPLE STEPS**

---

### **LESSON 1: SOLVING $AX + B = C$**

#### **Study: Solving $ax + b = c$**

Identify the strategy for solving one-step equations and apply it to multistep equations. Perform the reverse of two or more operations on an equation. Build a variable expression to determine how to isolate the variable.

*Duration: 0 hr 40 min*

#### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### **Quiz: Solving $ax + b = c$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 2: COLLECTING LIKE TERMS**

**Study: Collecting Like Terms**

Learn definitions of like terms and constants. Learn about collecting like terms, adding and subtracting coefficients of like terms, and solving equations with unlike terms.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Identifying Like Terms**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

**Quiz: Collecting Like Terms**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 3: USING THE DISTRIBUTIVE PROPERTY****Study: Using the Distributive Property**

Learn about using the distributive property with variable expressions and then collecting like terms.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Using the Distributive Property**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 4: VARIABLES ON BOTH SIDES OF THE EQUATION****Study: Variables on Both Sides of the Equation**

Learn about adding or subtracting variable expressions from both sides of an equation and about collecting variable terms on one side of an equation. Learn about equations with no solution.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Variables on Both Sides of the Equation (Basic)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

### **Quiz: Variables on Both Sides of the Equation (Advanced)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 5: THE PROFIT PROBLEM**

### **Study: The Profit Problem**

Apply methods from this unit to the real-world problem of calculating profit.

*Duration: 0 hr 40 min*

---

## **LESSON 6: SOLVING $|x| = b$**

### **Study: Solving $|x| = b$**

Learn about finding solution sets for absolute values by using a number line.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Solving $|x| = b$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 7: SOLVING $x^2 = b$**

### **Study: Solving $x^2 = b$**

Learn about evaluating expressions with exponents by isolating the variable and finding the principal square root of both sides.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

---

Core > California Algebra I-A

Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving  $x^2 = b$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

---

**LESSON 8: SOLVING & RADIC;  $X = B$**

**Study: Solving & radic;  $x = b$**

Learn to solve equations involving square roots.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Solving & radic;  $x = b$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 9: INEQUALITIES AND ABSOLUTE VALUE**

**Study: Inequalities and Absolute Value**

Learn about using a number line to find solution sets of equations with absolute values.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Inequalities and Absolute Value**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 10: INEQUALITIES AND  $X^2$**

**Study: Inequalities and  $x^2$**

---

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Learn about solving inequalities with exponents.

*Duration: 0 hr 40 min*

**Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Inequalities and  $x^2$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 11: INEQUALITIES AND  $\sqrt{x}$**

**Study: Inequalities and  $\sqrt{x}$**

Learn about solving inequalities with square roots by squaring both sides and plotting solution sets on a number line.

*Duration: 0 hr 40 min*

**Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Inequalities and  $\sqrt{x}$**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 12: MULTISTEP AND COMPOUND INEQUALITIES**

**Study: Multistep and Compound Inequalities**

Apply the techniques you have learned so far in this unit to solve multistep and compound inequalities.

*Duration: 0 hr 40 min*

**Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Multistep and Compound Inequalities**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## LESSON 13: SOLVING EQUATIONS WITH ROOTS, POWERS, OR MULTIPLE STEPS WRAP-UP

### Practice: Assignment

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

### Review: Solving Equations with Roots, Powers, or Multiple Steps

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hr 30 min*

### Discuss: The Importance of Strategy

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### Test (CS): Solving Equations with Roots, Powers, or Multiple Steps

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 75 points*

### Test (TS): Solving Equations with Roots, Powers, or Multiple Steps

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 50 points*

---

## LESSON 14: DIAGNOSTIC

### Diagnostic: Solving Equations with Roots, Powers, or Multiple Steps

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hr 30 min Scoring: 25 points*

## UNIT 8: FUNCTIONS

---

### LESSON 1: WHEN ONE THING DEPENDS ON ANOTHER

#### Study: When One Thing Depends on Another

Learn the definition and explore examples of functions as quantities that depend on other quantities.

*Duration: 0 hr 40 min*

#### Checkup: Practice Problems

*Core > California Algebra I-A*

*Copyright © 2013 Apex Learning Inc. Apex Learning®, the Apex Learning logo, ClassTools®, ClassTools Achieve®, ClassTools Virtual, Literacy Advantage, and Beyond Books® are either registered trademarks or trademarks of Apex Learning Inc.*

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: When One Thing Depends on Another**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

---

## **LESSON 2: FUNCTION NOTATION**

### **Study: Function Notation**

Learn about and explore examples of function notation.

*Duration: 0 hr 40 min*

### **Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Translating to Function Notation**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Function Notation for Specific Amounts**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr*

*15 min Scoring: 12 points*

### **Quiz: Naming Functions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## **LESSON 3: INPUT-OUTPUT MACHINES**

### **Study: Input-Output Machines**

Learn about the domain and range of functions, input-output diagrams, using rules for functions, and mathematical expressions in functions.

*Duration: 0 hr 40 min*

### **Checkpoint: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

---



### **Quiz: Using Functions**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 4: FUNCTIONS AND TABLES**

### **Study: Functions and Tables**

Learn about using input-output tables to define or describe functions, estimating values of functions, and finding a function's rule on a table.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Functions and Tables**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 5: FUNCTIONS AND GRAPHS**

### **Study: Functions and Graphs**

Learn about using bar graphs, pie charts, and line graphs to describe or define functions.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Functions and Graphs**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## **LESSON 6: FUNCTIONS AND FORMULAS**

### **Study: Functions and Formulas**

Learn about using algebraic rules and formulas to describe and define functions.

---

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Functions and Formulas**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring:*

*12 points*

### **Study: Solving the Profit Problem**

In a real-world application, use tables, rules, and the method of estimating values to write an equation that expresses a function. Solve the equation and express the output in a line graph.

*Duration: 0 hr 40*

*min*

---

## **LESSON 7: HOW MANY OUTPUTS?**

### **Study: How Many Outputs?**

Review functions and what makes them special; independent and dependent variables; inputs and outputs; and examples of relationships that might not be functional.

*Duration: 0 hr 40 min*

### **Quiz: How Many Outputs?**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## **LESSON 8: FUNCTIONS AND RELATIONS**

### **Study: Functions and Relations**

Learn about using mapping diagrams; ordered pairs on diagrams; the difference between mapping diagrams of functions and relations; the vertical-line test; and equations of functions and relations.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Mapping Functions and Relations**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

---

*min Scoring: 12 points*

### **Quiz: Identifying Functions and Relations**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

---

## **LESSON 9: DOMAIN AND RANGE**

### **Study: Domain and Range**

Learn about domain and range on a mapping diagram, estimating domain and range of functions, and calculating the domain of a function from an equation.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Domain and Range**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## **LESSON 10: FUNCTIONS WRAP-UP**

### **Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

### **Review: Functions**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hr 30 min*

### **Discuss: Real-World Functions**

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

### **Test (CS): Functions**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

*Scoring: 75 points*

### **Test (TS): Functions**

---

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min*

*Scoring: 50 points*

---

## LESSON 11: DIAGNOSTIC

### **Diagnostic: Functions**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0*

*hr 30 min Scoring: 25 points*

## UNIT 9: LINEAR EQUATIONS

---

### LESSON 1: CARTESIAN COORDINATE SYSTEMS

#### **Study: Cartesian Coordinate Systems**

Represent real-world information with points instead of bars on a graph. Discover that the Cartesian coordinate system is made up of two number lines. Identify the origin, the  $x$ -axis, the  $y$ -axis, and the four quadrants on the  $xy$ -plane. Graph sets of coordinates known as ordered pairs.

*Duration: 0 hr 40 min*

#### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

#### **Quiz: Reading Data from Graphs**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

#### **Quiz: Identifying Parts of a Cartesian Coordinate Grid**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

#### **Quiz: Plotting Coordinate Pairs**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

#### **Quiz: Points in the Four Quadrants**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

## LESSON 2: LINES IN THE XY-PLANE

### **Study: Lines in the xy-plane**

Learn about plotting solution set values of equations as data points on the xy-plane (that is, plotting the graph of the equation).

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Lines in the xy-plane**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## LESSON 3: SLOPE

### **Study: Slope**

Learn about rise, run, and the slope formula. Learn about rearranging a formula to compute rise and run, negative zero, and undefined slopes.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Finding the Slope of a Line (Basic)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

### **Quiz: Finding the Slope of a Line (Advanced)**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

### **Quiz: Identifying Types of Slopes**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12 points*

---

## LESSON 4: PARALLEL AND PERPENDICULAR LINES

**Study: Parallel and Perpendicular Lines**

Define parallel lines and the relationship of their slopes. Identify perpendicular lines, how they intersect, and the product of their slopes as negative reciprocals.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Parallel and Perpendicular Lines**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

---

**LESSON 5: SLOPE AND EQUATIONS****Study: Slope and Equations**

Learn about finding the equation of a line. Learn about slope as the coefficient of the variable in the linear equation ( $y = mx$ ).

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Slope and Equations**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

**LESSON 6: SLOPE-INTERCEPT FORM****Study: Slope-Intercept Form**

Determine the equations of lines that don't pass through the origin. Plot a set of points to find the graph, slope, and y-intercept equation of a line. Discover the general form of the slope-intercept equation of a line.

*Duration: 0 hr 40 min*

**Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

**Quiz: Slope-Intercept Form**

Take a quiz to assess your understanding of the material.

---

*Duration: 0 hr 15 min Scoring: 12 points*

---

## LESSON 7: POINT-SLOPE FORM

### **Study: Point-Slope Form**

Learn about the point-slope equation and about manipulating equations into slope-intercept form.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Point-Slope Equation of a Line**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min*

*Scoring: 12 points*

### **Quiz: Point-Intercept Equation of a Line**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15*

*min Scoring: 12 points*

---

## LESSON 8: LINEAR INEQUALITIES

### **Study: Linear Inequalities**

Learn about graphing inequalities and the half-plane. Discover three steps to graphing inequalities.

*Duration: 0 hr 40 min*

### **Checkup: Practice Problems**

Complete a set of practice problems to hone your calculation skills.

*Duration: 0 hr 20 min*

### **Quiz: Linear Inequalities**

Take a quiz to assess your understanding of the material.

*Duration: 0 hr 15 min Scoring: 12*

*points*

---

## LESSON 9: PROPERTIES OF LINES

**Study: Properties of Lines**

Derive information about lines in their various forms.

*Duration: 0 hr 40 min*

**Practice: Properties of Lines**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 30 min Scoring: 25 points*

---

**LESSON 10: LINEAR EQUATIONS WRAP-UP****Practice: Assignment**

Submit your work for a set of 20 practice problems.

*Duration: 0 hr 40 min Scoring: 100 points*

**Review: Linear Equations**

Prepare for the unit test by reviewing key concepts and skills.

*Duration: 0 hr 30 min*

**Discuss: Lines and Graphs Beyond Math Class**

Take part in a three- to five-question discussion about applying methods learned in this unit.

*Duration: 0 hr 20 min Scoring: 30 points*

**Test (CS): Linear Equations**

Take a computer-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 75 points*

**Test (TS): Linear Equations**

Take a teacher-scored test to assess what you have learned in this unit.

*Duration: 0 hr 30 min Scoring: 50 points*

---

**LESSON 11: DIAGNOSTIC****Diagnostic: Linear Equations**

Take a diagnostic unit test that will generate a study plan based on your responses.

*Duration: 0 hr 30 min Scoring: 25 points*

**UNIT 10: ALGEBRA 1A SEMESTER 2 WRAP-UP**

---



## LESSON 1: ALGEBRA 1A SEMESTER 2

### **Review: Algebra 1A Semester 2**

*Duration: 1 hr*

### **Exam: Algebra 1A Semester 2**

*Duration: 0 hr 50 min Scoring: 200 points*