



Algebra I

Materials List

Acknowledgment

Thank you to all the Texas educators and stakeholders who supported the review process and provided feedback. These materials are the result of the work of numerous individuals, and we are deeply grateful for their contributions.

Notice

These learning resources have been built for Texas students, aligned to the Texas Essential Knowledge and Skills, and are made available pursuant to Chapter 31, Subchapter B-1 of the Texas Education Code.

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ALGEBRA I MATERIALS

Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

The Course Materials list provides an overall view of the materials required for each lesson in the course. Consult the specific Lesson Overview for additional details.

| | Algebra Tiles | Calculators | Chairs | Colored Paper | Colored Pencils | Cups | Glue | Graph Paper | Highlighters | Index Cards | Lesson-Embedded Resources | Markers | Masking Tape | Mirrors | Modeling Clay | Patty Paper | Pennies | Poster Paper | Problem-Solving Model Graphic Organizer | Scissors | Sticker Dots | Sticky Notes | Straightedges | String | Technology | Thermometer | Uncooked Pasta |
|--|---------------|-------------|--------|---------------|-----------------|------|------|-------------|--------------|-------------|---------------------------|---------|--------------|---------|---------------|-------------|---------|--------------|---|----------|--------------|--------------|---------------|--------|------------|-------------|----------------|
| MODULE 1 Searching for Patterns | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 1 Quantities and Relationships | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Introduction Lesson | | | | | | | | | | | | | | | | | | ● | | | | | | | | | |
| 1 Understanding Quantities and Their Relationships | | | | | | | ● | | | | | | | | | | | | | ● | | | | | | | |
| 2 Analyzing and Sorting Graphs | | | | | | | | | | ● | | | | | | | | ▲ | | ● | | | | | | | |
| 3 Recognizing Functions and Function Families | | | | | | | ● | | | ● | | | | | | | | | | | | | | | ● | | |
| 4 Recognizing Functions by Characteristics | | | | | | | | | | ● | | | | | | | | ▲ | ● | | | | | | | | |
| TOPIC 2 Sequences | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Recognizing Patterns and Sequences | | | | | | | | | | | | | | | | | | ▲ | ● | | | | | | | | |
| 2 Arithmetic and Geometric Sequences | | | | | | | ● | | | ● | | | | | | | | | | ● | | | | | | | |
| 3 Determining Recursive and Explicit Expressions from Contexts | | | | | | | | | | ● | | | | | | | | ▲ | | | | | | | ▲ | | |

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| MODULE 2 Exploring Constant Change | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 1 Linear Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Least Squares Regressions | | | | | | | | | | | | | | | | | | | ● | | | | | | ● | | ● |
| 2 Correlation | | | | | | | | | | | | | | | | | | | ● | | | | | | | ● | |
| 3 Making Connections Between Arithmetic Sequences and Linear Functions | | | ▲ | | | ▲ | | | | | | | | | | | | | | | | | | | | | |
| 4 Point-Slope Form of a Line | | | | | | | | ▲ | | | ● | | | | | | | | ● | ● | | | | | | | |
| 5 Using Linear Equations | | | | | ▲ | | | | | | | | | | | | | | | | | | ● | | | | |
| 6 Making Sense of Different Representations of a Linear Function | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| TOPIC 2 Transformations and Comparisons of Linear Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Transforming Linear Functions | | | | | | | | | | | | ● | ● | | | | | ▲ | ● | | | | | | | | |
| 2 Vertical and Horizontal Transformations of Linear Functions | | | | | | | | | | | | | | | ▲ | | | | | | | | | | ▲ | | |
| 3 Determining Slopes of Perpendicular Lines | | | | | | | | | | | | | | | | ● | | | ● | | | | ● | | | | |
| 4 Comparing Linear Functions in Different Forms | | | | ▲ | | | | | | | | | | | | | | | ● | | | | | | | ▲ | |

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| MODULE 3 Modeling Linear Equations and Inequalities | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 1 Linear Equations and Inequalities | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Solving Linear Equations | ▲ | | | | | | | | | | ● | | | | | | | ▲ | | | ▲ | | | | | | |
| 2 Literal Equations | | | | | | | | | | | | | | | | | | ▲ | | | | | | | | | ▲ |
| 3 Modeling Linear Inequalities | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 2 Systems of Equations and Inequalities | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Using Graphing to Solve Systems of Equations | | | | ▲ | | | | | | ▲ | | | | | | | | ▲ | | | ▲ | | | ▲ | ● | | |
| 2 Using Substitution to Solve Linear Systems | | | | | | | | | | | | | | | | | | | ● | | | | | | | | |
| 3 Using Linear Combinations to Solve a System of Linear Equations | | | | | | | | | | | | | | | | | | ▲ | ● | | | | | | | | |
| 4 Graphing Inequalities in Two Variables | | | | | | | | | | | | | | | | | | ▲ | | | | | | | | | |
| 5 Systems of Linear Inequalities | | | | ▲ | | | | | | | | | | | | | | | | | | | | | ▲ | | |
| 6 Solving Systems of Equations and Inequalities | | | | ▲ | | | | | | | | | | | | | | ▲ | ● | | | | | | | | |

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| MODULE 4 Investigating Growth and Decay | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 1 Introduction to Exponential Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Properties of Powers with Integer Exponents | | ● | | | | | | | | ▲ | | | | | | | | | | | | | | | | ▲ | |
| 2 Analyzing Properties of Powers | | | | | | | | | | | | | | | | | | ▲ | | ▲ | | | | | | | |
| 3 Geometric Sequences and Exponential Functions | | | | | | | | | | | | | | | | | | | ● | | | | | | | ▲ | |
| 4 Rewriting Square Roots | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 Rational Exponents and Graphs of Exponential Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 2 Using Exponential Equations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Exponential Equations for Growth and Decay | | | | | | | | | | | | | | | | | | ▲ | ● | | | | | | | ● | |
| 2 Interpreting Parameters in Context | | | | | | | | | | | | | | | | | | ▲ | ● | | | | | | | ▲ | |
| 3 Modeling Using Exponential Functions | | | | | | | | | | | | | | | | | | | | | | | | | | ● | |

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| MODULE 5 Maximizing and Minimizing | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 1 Introduction to Quadratic Functions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Exploring Quadratic Functions | | | | | ▲ | | | | | | | | | ▲ | | ● | ▲ | | ● | | | | | | | ● | |
| 2 Key Characteristics of Quadratic Functions | | | | | ▲ | | | | | | | | | ▲ | | ● | | ▲ | ● | | | | | | | ● | |
| 3 Quadratic Function Transformations | | | | | | | | | | | | | | | | | | | | | | | | | | ● | |
| 4 Transformations of Quadratic Functions | | | | | ▲ | | | | | | | | | | | | | ▲ | | | | | | | | ● | |
| TOPIC 2 Polynomial Operations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Adding and Subtracting Polynomials | | | | | | | ● | | | | ● | | | | | | | ▲ | | ● | | | | | | | |
| 2 Multiplying Polynomials | ● | | | | | | | | | | | | | | | | | | | | | | | | | ● | |
| 3 Polynomial Division | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOPIC 3 Solving Quadratic Equations | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Representing Solutions to Quadratic Equations | | | | | ▲ | | | | | | | | | | | | | | | | | | | | | | |
| 2 Solutions to Quadratic Equations in Vertex Form | | | | | | | | | | | | | | | | | | | ● | | | | | | | ▲ | |
| 3 Factoring and Completing the Square | | | | | | | | | | | | | | | | | | ▲ | ● | | | | | | | ▲ | |
| 4 The Quadratic Formula | | | | | | | | | | ▲ | | | | | | | | | | | | | | | | ● | |
| 5 Using Quadratic Functions to Model Data | | | | | | | | | | | | | | | | | | | ● | | | | | | | ● | |

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