

# Algebra I

Algebra I TEKS :: The student is expected to...

- describe independent and dependent quantities in functional relationships;[A.1A]
- gather and record data and use data sets to determine functional relationships between quantities;[A.1B]
- describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations;[A.1C]
- represent relationships among quantities using concrete models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities[A.1D]
- interpret and make decisions, predictions, and critical judgments from functional relationships.[A.1E]
- identify and sketch the general forms of linear ( $y = x$ ) and quadratic ( $y = x^2$ ) parent functions;[A.2A]
- identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete;[A.2B]
- interpret situations in terms of given graphs or creates situations that fit given graphs[A.2C]
- collect and organize data, make and interpret scatterplots (including recognizing positive, negative, or no correlation for data approximating linear situations), and model, predict, and make decisions and critical judgments in problem situations.[A.2D]
- use symbols to represent unknowns and variables[A.3A]
- look for patterns and represent generalizations algebraically.[A.3B]
- find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations;[A.4A]
- use the commutative, associative, and distributive properties to simplify algebraic expressions[A.4B]
- connect equation notation with function notation, such as  $y = x + 1$  and  $f(x) = x + 1$ . [A.4C]
- determine whether or not given situations can be represented by linear functions;[A.5A]
- determine the domain and range for linear functions in given situations[A.5B]
- use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions.[A.5C]
- develop the concept of slope as rate of change and determine slopes from graphs, tables, and algebraic representations;[A.6A]
- interpret the meaning of slope and intercepts in situations using data, symbolic representations, or graphs;[A.6B]
- investigate, describe, and predict the effects of changes in  $m$  and  $b$  on the graph of  $y = mx + b$ ;[A.6C]
- graph and write equations of lines given characteristics such as two points, a point and a slope, or a slope and  $y$  intercept;[A.6D]
- determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations;[A.6E]
- interpret and predict the effects of changing slope and  $y$ -intercept in applied situations[A.6F]
- relate direct variation to linear functions and solve problems involving proportional change.[A.6G]
- analyze situations involving linear functions and formulate linear equations or inequalities to solve problems; [A.7A]
- investigate methods for solving linear equations and inequalities using concrete models, graphs, and the properties of equality, select a method, and solve the equations and inequalities[A.7B]
- interpret and determine the reasonableness of solutions to linear equations and inequalities.[A.7C]
- analyze situations and formulate systems of linear equations in two unknowns to solve problems;[A.8A]
- solve systems of linear equations using concrete models, graphs, tables, and algebraic methods[A.8B]
- interpret and determine the reasonableness of solutions to systems of linear equations.[A.8C]
- determine the domain and range for quadratic functions in given situations;[A.9A]
- investigate, describe, and predict the effects of changes in  $a$  on the graph of  $y = ax^2 + c$ ;[A.9B]
- investigate, describe, and predict the effects of changes in  $c$  on the graph of  $y = ax^2 + c$ [A.9C]
- analyze graphs of quadratic functions and draw conclusions.[A.9D]
- solve quadratic equations using concrete models, tables, graphs, and algebraic methods[A.10A]

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- make connections among the solutions (roots) of quadratic equations, the zeros of their related functions, and the horizontal intercepts (x-intercepts) of the graph of the function.[A.10B]
- use patterns to generate the laws of exponents and apply them in problem-solving situations;[A.11A]
- analyze data and represent situations involving inverse variation using concrete models, tables, graphs, or algebraic methods[A.11B]
- analyze data and represent situations involving exponential growth and decay using concrete models, tables, graphs, or algebraic methods.[A.11C]

Planning :: The student is expected to...

- Planning Calendar and Table of Contents

Unit 1: Pre-Algebra :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 2: Solving Equations and Linear Inequalities :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 3: Introduction to Functions :: The student is expected to...

- Platform
- Student Edition
- TeacherEdition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 4: Linear Functions :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 5: Systems of Linear Equations :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
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Unit 6: Exponents and Polynomials :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 7: Factoring :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Unit 8: Quadratics and Non-Linear Functions :: The student is expected to...

- Platform
- Student Edition
- Teacher Edition
- Vocabulary
- Quizlet Flash Cards
- Supplemental Lessons

Test Bank :: The student is expected to...

- Pre-Algebra
- Reporting Category 1
- Reporting Category 2
- Reporting Category 3
- Reporting Category 4
- Reporting Category 5
- Fall Semester Final Exam

Archive 2012-2013 :: The student is expected to...

- 2011-2012 Curriculum Resources
- Week 1.1
- Week 1.2
- Week 1.3
- Week 1.4
- Week 1.5
- Week 1.6
- Week 1.7
- Week 1.8
- Week 2.1
- Week 3.6
- Week 2.2
- Week 2.3

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- Week 2.4
- Week 2.5
- Week 2.6
- Week 2.7
- Week 3.1
- Week 3.2
- Week 3.3
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- Week 3.7
- Week 3.8
- Week 3.9
- Week 4.1-4.6
- Week 4.7
- Week 4.8
- Week 4.9
- Week 4.10
- Lesson Plans

Black Out Materials :: The student is expected to...

- Reporting Category 1
- Reporting Category 2
- Reporting Category 3
- Reporting Category 4
- Reporting Category 5
- Answer Key