

# Rockwall ISD Algebra 1 (Grade Level and Honors) Parent Guide



## Course Resources and Support

**Online Textbook** Log into Google with student google account. [RISD Secondary Online Learning Resources](#)

**Texas Gateway Resources** Search by TEK #, e.g. A.5A and look for OnTrack resources [Texas Gateway](#)

**STAAR Released Questions by Unit** <https://goo.gl/7Mcsuf>

**Math4Texas** Search by Grade and topic <https://www.math4texas.org/Math4Texas>

**Imaging Math** Purchased by each Campus. Log into Google with student google account. <https://lms.thinkthroughmath.com>

Grading Period*	Unit Goals (TEKS)	Algebra 1 Textbook <a href="#">McGraw Hill</a>
1	<p><b>Unit 1: Linear Expressions, Equations, and Inequalities</b>                      Students will be able to solve complex linear equations, literal equations, and linear inequalities, and understand the solution in the context of the situation.</p> <p><b>Student Learning Objectives:</b></p> <p>Goal 1: Simplifying polynomial expressions</p> <ul style="list-style-type: none"> <li>• I can simplify polynomial expressions using addition and subtraction in degrees of one or two. (A.10A)</li> <li>• I can rewrite polynomial expressions of degree one and degrees two in equivalent forms using the distributive property. (A.10D)</li> </ul> <p>Goal 2: Solve linear equations (including applications)</p> <ul style="list-style-type: none"> <li>• <b>I can solve linear equations with variables on both sides. (A.5A, SAT)</b></li> <li>• <b>I can solve linear equations that require using the distributive property.(A.5A, SAT)</b></li> <li>• I can simplify and solve formulas and other literal equations for a desired variable. (A.12E)</li> </ul> <p>Goal 3: Solve linear inequalities (including applications)</p> <ul style="list-style-type: none"> <li>• I can solve linear inequalities in one variable using the distributive property and variables on both sides. (A.5B, SAT)</li> </ul>	<p><b>Chapters 1, 2, Sections 5-1 thru 5-3, 8-1</b></p>

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<p><b>Unit 2: Exploring Linear and Nonlinear Functions</b> Students will be able to analyze aspects of relations and functions. <b>Student Learning Objectives:</b> Goal 1: Review and extension of functions</p> <ul style="list-style-type: none"><li>• I can determine whether relations define a function in multiple representations. (A.12A, SAT)</li><li>• I can move flexibly between multiple representations of functions. (SAT)</li></ul> <p>Goal 2: Domain and Range of Functions</p> <ul style="list-style-type: none"><li>• <b>I can determine the domain and range of function (continuous and discrete) and represent it using inequalities. (Linear A.2A)-[R], (Quadratic A.6A)-[R], (Exponential A.9A, SAT)</b></li><li>• I can evaluate functions, expressed in function notation, given one or more elements in their domains. (A12.B, SAT)</li></ul> <p>Goal 3: Characteristics of Linear Functions</p> <ul style="list-style-type: none"><li>• I can identify terms of arithmetic sequences when the sequences are given in function form using recursive processes. (A.12C)</li><li>• I can write a formula for the <math>n^{\text{th}}</math> term of arithmetic sequences given the value of several of their terms. (A.12D) (Honors Only)</li><li>• I can determine the slope of a line given tables, graphs, and equations. (A.3A, SAT)</li><li>• <b>I can graph linear functions given mathematical and real-world problems. (A.3C)-[R] (SAT)</b></li><li>• <b>I can identify key features of a linear function in mathematical and real-world problems. (A.3C)-[R] (SAT)</b></li></ul>	<p><b>Sections 3-1, 3-2, 3-3, 3-5, 4-1</b></p>
<p><b>Unit 3: Writing Linear Functions</b> Students will be able to write equations for lines, in any form, given sufficient information about the line. <b>Student Learning Objectives:</b> Goal 1: Calculate Slope</p> <ul style="list-style-type: none"><li>• <b>I can calculate the rate of change of a linear function given any representation, including real-world problems. (A.3B)-[R] (SAT)</b></li></ul> <p>Goal 2: Writing Linear Equations</p> <ul style="list-style-type: none"><li>• I can write linear equations in two variables in any form given one point and the slope, and given two points. (A.2B, SAT)</li><li>• <b>I can write equations of lines given a table of values, a graph, and a verbal description. (A.2C)-[R] (SAT)</b></li><li>• I can write and solve equations involving direct variation. (A.2D)</li><li>• I can write a formula for the <math>n^{\text{th}}</math> term of arithmetic sequences given the value of several of their terms. (A.12D) (Grade Level Only)</li></ul> <p>Goal 3: Writing Equations of Parallel and Perpendicular Lines</p> <ul style="list-style-type: none"><li>• I can write equations of lines that contain a given point and is parallel and/or perpendicular to given lines. (A.2E, A.2F)</li></ul>	<p><b>Sections 3-3, 3-4, 4-2, 4-3, 4-4</b></p>



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3	<p><b>Unit 6a: Laws of Exponents and Expressions</b> Students will be able to multiply, divide and simplify polynomials including using laws of exponents <b>Student Learning Objectives:</b> Goal 1: Understanding the Laws of Exponents</p> <ul style="list-style-type: none"><li>● <b>I can use the laws of exponents, including rational exponents. (A.11B)-[R]</b></li><li>● I can multiply polynomials and simplify the product. (A.10B)</li><li>● I can divide polynomials by factoring or long division, with and without remainders. (A.10C) (Honors Only)</li></ul> <p><b>Unit 6b: Factoring</b> Students will be able to factor polynomials using different methods. <b>Student Learning Objectives:</b> Goal 1: Factoring Trinomials</p> <ul style="list-style-type: none"><li>● <b>I can factor trinomials with manipulatives, pictorial models and symbolically. (A.10E)- [R]</b></li><li>● <b>I can identify perfect square trinomials and apply the formula to find its factors. (A.10E)- [R]</b></li><li>● I can identify the difference of perfect squares in a variety of forms and apply the formula to find the factors. (A.10F)</li><li>● I can divide polynomials by factoring or long division, with and without remainders. (A.10C) (Grade Level Only)</li></ul> <p><b>Unit 7 Investigation and Application of Quadratic Functions</b> Students will understand the nature of quadratic functions, their key characteristics, applications and transformations. <b>Student Learning Objectives:</b> Goal 1: Identifying the attributes of Quadratic Functions</p> <ul style="list-style-type: none"><li>● <b>I can graph quadratic functions on the coordinate plane and identify key attributes. A.7(A)-[R]</b></li><li>● <b>I can determine and represent the domain and range of quadratic functions using inequalities. (A.6A) - [R]</b></li></ul> <p>Goal 2: Writing Quadratic Equations in Various Forms</p> <ul style="list-style-type: none"><li>● I can write equations of quadratic functions given the vertex and another point on the graph. (A.6B)</li><li>● I can write the equation in vertex form, and rewrite the equation in standard form. (A.6B)</li><li>● I can write the equation of a family of quadratic equations given its real roots and their graphs. A.6(C)</li><li>● I can identify the equation from a family of quadratic equations given its graph. (2017 STAAR #10) A.6(C)</li><li>● I can write, using technology, quadratic functions that provide a reasonable fit to data to estimate solutions and make predictions for real-world problems. (A.8B, SAT)</li></ul> <p>Goal 3: Identifying Quadratic Transformations</p> <ul style="list-style-type: none"><li>● <b>I can determine the effects on the graph of the quadratic parent function with any combination of transformations. (A.7C) - [R]</b></li></ul>	<p><b>Chapter 7 and 8</b></p> <p><b>Chapter 8</b></p> <p><b>Chapter 9</b></p>
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	<ul style="list-style-type: none"><li>• I can explain why my solution is reasonable.</li><li>• I can communicate mathematical ideas verbally, in written format, with models and with symbols.</li><li>• I understand all parts of the STAAR formula chart and know which formula to apply in different situations.</li><li>• I can bubble a number correctly on a griddable using appropriate place value and negative sign if needed</li></ul>	
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\* Units may cross grading periods. Indicated here is in which grading period the unit generally will begin.