Algebra I Pacing Guide for a 210-day Instructional Calendar

Number of days includes -

- ½ day allotted for the unit overview & readiness (prerequisite skill assessment & preparation)
- 1 day allotted for each lesson (45 minutes)
- 1 day allotted for each section quiz, including review and remediation
- 1 day allotted for each STAAR review quiz
- 1 day allotted for each unit quiz
- 1 day allotted for the culminating project
- 1 ½ days allotted in units 4 & 6 for introductory inquiry units (prior to beginning units)
- ½ day allotted for wrap up and student self assessment
- 4 days allotted for Fall and Spring STAAR Review quizzes
- 13 days allotted for End of Course Countdown Review

Unit	Title	Days
1	**Linear Equations, Inequalities, and Systems** Section A 1.1 Exploring Expressions and Equations 1.2 Writing Equations to Model Relationships, Part 1 1.3 Writing Equations to Model Relationships, Part 2 1.4 Equations and Their Solutions 1.5 Equations and Their Graphs Section B 1.6 Equivalent Equations 1.7 Explaining Steps for Rewriting Equations 1.8 Choosing the Correct Variable to Solve For, Part 1 1.9 Choosing the Correct Variable to Solve For, Part 2 1.10 Connecting Equations to Graphs, Part 1 1.11 Connecting Equations to Graphs, Part 2 Section C 1.12 Writing the Equation of a Line 1.13 Lines from Tables and Graphs 1.14 Writing Equations of Parallel and Perpendicular Lines 1.15 Direct Variation	22

Unit	Title	Days
	Project Unit 1 Slopes and Intercepts Unit 1 Student Self Assessment	
	If needed: Review, Assess, Reteach, Extend	1
2	**Linear Inequalities and Systems** Section A 2.1 Writing and Graphing Systems of Equations 2.2 Writing Systems of Equations 2.3 Solving Systems by Substitution 2.4 Solving Systems by Elimination, Part 1 2.5 Solving Systems by Elimination, Part 2 2.6 Solving Systems by Elimination, Part 3 2.7 Systems of Linear Equations and Their Solutions Section B 2.8 Representing Situations with Inequalities 2.9 Solutions to Inequalities 2.10 Writing and Solving Inequalities in One Variable Section C 2.11 Graphing Linear Inequalities in Two Variables 2.12 Using Linear Inequalities as Constraints 2.13 Solving Problems with Inequalities in Two Variables Section D 2.14 Solutions to Systems of Linear Inequalities in Two Variables 2.15 Solving Problems with Systems of Linear Inequalities in Two Variables Project Unit 2 Modeling with Systems of Inequalities in Two Variables Unit 2 Student Self Assessment	23
	If needed: Review, Assess, Reteach, Extend	1
3	**Two-Variable Statistics** Section A 3.1 Linear Models 3.2 Fitting Lines 3.3 Residuals Section B 3.4 The Correlation Coefficient 3.5 Using the Correlation Coefficient 3.6 Causal Relationships Project Unit 3 Two-Variable Statistics	12

Unit	Title	Days
	Unit 3 Student Self Assessment	
	If needed: Review, Assess, Reteach, Extend	1
4	**Functions** Inquiry Project Unit 4 Defining Functions Section A 4.1 Describing and Graphing Situations 4.2 Function Notation 4.3 Interpreting and Using Function Notation 4.4 Using Function Notation to Describe Rules, Part 1 4.5 Using Function Notation to Describe Rules, Part 2 Section B 4.6 Features of Graphs 4.7 Finding Slope 4.8 Using Graphs to Find Average Rate of Change 4.9 Interpreting and Creating Graphs 4.10 Comparing Graphs 4.11 Graphing a Function Using Transformations Section C 4.12 Domain and Range, Part 1 4.13 Domain and Range, Part 2 Section D 4.14 Sequences 4.15 Introducing Geometric Sequences 4.16 Introducing Arithmetic Sequences 4.17 Representing Sequences 4.18 The n^{th} Term of an Arithmetic Sequence Project Unit 4 Using Functions to Model Battery Power Unit 4 Student Self Assessment	28.5
	If needed: Review, Assess, Reteach, Extend	1
5	**Introduction to Exponential Functions** Section A 5.1 Properties of Exponents 5.2 Rational Exponents 5.3 Patterns of Growth 5.4 Representing Exponential Growth 5.5 Representing Exponential Decay 5.6 Negative Exponents and Scientific Notation	22

Unit	Title	Days
	5.7 Analyzing Graphs Section B 5.8 Exponential Situations as Functions 5.9 Interpreting Exponential Functions 5.10 Looking at Rates of Change 5.11 Modeling Exponential Behavior 5.12 Reasoning about Exponential Graphs, Part 1 Section C 5.13 Reasoning about Exponential Graphs, Part 2 5.14 Which One Changes Faster? 5.15 Changes Over Equal Intervals Project Unit 5 Introduction to Exponential Functions Unit 5 Student Self Assessment	
	If needed: Review, Assess, Reteach, Extend	1
Fall	**STAAR Review Quiz**	2
6	**Working with Polynomials** Inquiry Project Unit 6 Area Model Multiplication Section A 6.1 Add and Subtract Polynomials 6.2 Multiplying Polynomials 6.3 Dividing Polynomials Section B 6.4 Greatest Common Factor and Factor by Grouping 6.5 Factor Trinomials 6.6 Factor Special Products 6.7 General Strategy for Factoring Polynomials Project Unit 6 Polynomials and Rectangles Unit 6 Student Self Assessment	14.5
	If needed: Review, Assess, Reteach, Extend	1
7	**Introduction to Quadratic Functions** Section A 7.1 Patterns of Change 7.2 Introduction to Quadratic Relationships Section B 7.3 Determining if a Function is Quadratic 7.4 Comparing Quadratic and Exponential Functions	25

Unit	Title	Days
	7.5 Building Quadratic Functions to Describe Situations, Part 1 7.6 Building Quadratic Functions to Describe Situations, Part 2 7.7 Domain, Range, Vertex, and Zeros of Quadratic Functions Section C 7.8 Equivalent Quadratic Expressions 7.9 Standard Form and Factored Form 7.10 Graphs of Functions in Standard and Factored Forms Section D 7.11 Graphing from the Factored Form 7.12 Graphing the Standard Form, Part 1 7.13 Graphing the Standard Form, Part 2 7.14 Graphs that Represent Situations 7.15 Vertex Form 7.16 Graphing from the Vertex Form 7.17 Changing the Vertex Project Unit 7 Designing a Fountain Unit 7 Student Self Assessment	
	If needed: Review, Assess, Reteach, Extend	1
8	**Quadratic Equations** Section A 8.1 Finding Unknown Inputs 8.2 When and Why Do We Write Quadratic Equations? Section B 8.3 Solving Quadratic Equations by Reasoning 8.4 Solving Quadratic Equations with the Zero Product Property 8.5 How Many Solutions? 8.6 Rewriting Quadratic Expressions in Factored Form, Part 1 8.7 Rewriting Quadratic Expressions in Factored Form, Part 2 8.8 Rewriting Quadratic Expressions in Factored Form, Part 3 8.9 Solving Quadratic Equations by Using Factored Form 8.10 Rewriting Quadratic Expressions in Factored Form, Part 4 Section C 8.11 Writing Quadratic Equations Given Real Solutions 8.12 Using Technology to Find the Quadratic Regression Project Unit 8 Modeling Rocket Flight Unit 8 Student Self Assessment	19
	If needed: Review, Assess, Reteach, Extend	1

Unit	Title	Days
9	**More Quadratic Equations** Section A 9.1 What are Perfect Squares? 9.2 Completing the Square, Part 1 9.3 Completing the Square, Part 2 9.4 Completing the Square, Part 3 9.5 Quadratic Equations with Irrational Solutions Section B 9.6 The Quadratic Formula 9.7 Applying the Quadratic Formula 9.8 Deriving the Quadratic Formula Section C 9.9 Writing Quadratics in Different Forms 9.10 Rewriting Quadratic Expressions in Vertex Form 9.11 Using Quadratic Expressions in Vertex Form to Solve Problems Project Unit 9 Using Quadratic Equations to Model Situations and Solve Problems Unit 9 Student Self Assessment	18
	If needed: Review, Assess, Reteach, Extend	1
Spring	**STAAR Review Quiz**	2
	End of Course Countdown Ideas Topics Solving Equations Slope Calculations Rewriting Equations in Different Forms Key Features of Linear Functions Domain and Range of Linear Functions Factoring Polynomials Key Features of Quadratic Functions Solving Quadratic Functions Key Features of Exponential Functions Domain and Range of Quadratic & Exponential Functions Regressions Transformations of Functions	13

Total = 210 days of instruction (45-minute class periods)