

PA State Standards:

Key Assignment (activities, projects, essays, reading, etc):

A1.1.1.1: Represent and/or use numbers in equivalent forms. A1.1.1.2: Apply number theory concepts to show relationships between real numbers in problem-solving settings. A1.1.1.3: Use exponents, roots, and/or absolute values to solve problems. A1.1.1.5: Simplify expressions involving polynomials. A1.1.2.1: Write, solve, and/or graph linear equations using various methods. A1.1.3.1: Write, solve, and/or graph linear inequalities using various methods. A.1.2.1.1: Analyze and/or use patterns or relations. A.1.2.1.2: Interpret and/or use linear functions and their equations, graphs, or tables. A.1.2.2.1: Describe, compute, and/or use the rate of change (slope) of a line.

Assessments (formative, summative, district, etc):

Weekly formative assessments will be give for quick checks for understanding. Quizzes will be given after a few lessons. Summative unit tests will be given after the conclusion of a unit.

Instructional Resources (textbooks-include publisher/year/edition, supplemental materials, technology, etc.)

Resources to be used include: Prentice Hall Mathematics Algebra 1 Book 2007, Khan Academy, Keystone Algebra 1 Samples.

UNIT	TOPIC	SKILL	KEYSTONE ALGEBRA 1 STANDARD	PACING (DAYS)	
Unit 1: Equations & Inequalities	Unit 1 Intro	Vocabulary		1	
	Algebraic Equations Basics	Testing Solutions to Equations		1	
	One-Step Addition & Subtraction Equations	One-Step Addition & Subtraction Equations		1	
	One-Step Multiplication & Division Equations	One-Step Multiplication & Division Equations		1	
	Finding Mistakes in One-Step Equations	Finding Mistakes in One-Step Equations		1	
	Quiz 1				2
	Combining Like Terms	Combine Like Terms with Negative Coefficients			1
		Combine Like Terms with Rational Coefficients			1
	The Distributive Property & Equivalent Expressions	Distributive Property with Variables (Negative Numbers)			1
		Combine Like Terms with Negative Coefficients & Distribution	A1.1.2.1: Write, solve, and/or graph linear equations using various methods.		1
		Equivalent Expressions: Negative Numbers & Distribution	A1.1.3.1: Write, solve, and/or graph linear inequalities using various methods.		1
	Quiz 2 (Quiz 3 on KA)				2
	Two-Step Equations	Two-Step Equations			1
	Finding Mistakes in Two-Step Equations	Finding Mistakes in Two-Step Equations			1
	Equations with Variables on Both Sides	Equations with Variables on Both Sides			1
	Equations with Parentheses	Equations with Parentheses			1
	Quiz 3 (Quiz 5 on KA)				2
	Intro to Inequalities with Variables	Inequality from Graph			1
		Plotting Inequalities			1
	Testing Solutions to Inequalities	Testing Solutions to Inequalities			1
	Quiz 4 (Quiz 2 on KA)				2
	One- and Two-Step Inequalities	One-Step Inequalities			1
		Two-Step Inequalities			1
	Quiz 5 (Quiz 4 on KA)				2
	Unit Test				3

32 Total Days





UNIT	TOPIC	SKILL	KEYSTONE ALGEBRA 1 STANDARD	PACING (DAYS)
Unit 4: Functions & Sequences	Unit 4 Intro	Vocabulary		1
	Math Patterns	Patterns with Numbers		1
		Patterns with Shapes		1
	Patterns with Variables	Rules that Relate 2 Variables		1
		Tables from Rules that Relate 2 Variables		1
		Graphs of Rules that Relate 2 Variables		1
		Extend Patterns		1
		Relationships between 2 Patterns		1
		Quiz 1		2
	Functions Intro	Evaluate Functions	A.1.2.1.1: Write, solve, and/or graph linear equations using various methods.	1
		Evaluate Functions from their Graph	A.1.2.1.1: Analyze and/or use patterns or relations.	1
		Function Rules from Equations	A.1.2.1.2: Interpret and/or use linear functions and their equations, graphs, or tables.	1
		Quiz 2		2
	Linear Models	Linear Equations Word Problems		1
		Linear Models Word Problems		1
	Linear & Nonlinear Functions	Writing Linear Functions Word Problems		1
		Linear & Nonlinear Functions		1
		Interpreting Graphs of Functions		1
		Quiz 3		2
		Unit Test		3
				25 Total days

KEYSTONE ALGEBRA 1 STANDARD

PACING (DAYS)

UNIT	TOPIC	SKILL	PACING (DAYS)
Unit 5: Exponents, Radicals & Irrational Numbers	Unit 5 Intro	Vocabulary	1
	Square Roots & Cube Roots	Square Roots	1
		Cube Roots	1
	Irrational Numbers	Roots of Decimals & Fractions	1
		Classify Numbers: Rational & Irrational	1
		Classify Numbers	1
		Quiz 1	2
	Exponents with Negative Bases	Exponents with Integer Bases	1
		Exponents with Negative Fractional Bases	1
	Exponents Properties Intro	Multiply Powers	1
		Power of Powers	1
		Divide Powers	1
		Powers of Products & Quotients	1
		Quiz 2	2
	Negative Exponents	Negative Exponents	1
		Multiply & Divide Powers (Integer Exponents)	1
	Powers of Products & Quotients (Integer Exponents)	Multiply & Divide Powers (Integer Exponents)	1
		Powers of Products & Quotients (Integer Exponents)	1
	Quiz 3	2	
	Unit Test	3	
A1.1.1.3: Use exponents, roots, and/or absolute values to solve problems.			24 Total Days

KEYSTONE ALGEBRA 1 STANDARD

UNIT	TOPIC	SKILL	PACING (DAYS)	
Unit 6: Quadratics	Unit 6 Intro	Vocabulary	1	
	Equations with Square Roots & Cube Roots	Equations with Square Roots & Cube Roots	1	
		Equations with Square Roots: Decimals & Fractions	1	
		Square and Cube Challenge	1	
		Quiz 1	2	
	Combining Like Terms	Combining Like Terms with Negative Coefficients	1	
		Combining Like Terms with Rational Coefficients	1	
		Distributive Property with Variables (Negative Numbers)	1	
	The Distributive Property & Equivalent Expressions	Combining Like Terms with Negative Coefficients & Distribution	1	
		Equivalent Expressions: Negative Numbers & Distribution	1	
		Quiz 2	2	
	Interpreting Graphs of Functions	Interpreting Graphs of Functions	1	
	Unit Test	Unit Test	3	
				17 Total Days

A1.1.1.1: Represent and/or use numbers in equivalent forms.  
 A1.1.1.2: Apply number theory concepts to show relationships between real numbers in problem-solving settings.  
 A1.1.1.5: Simplify expressions involving polynomials.