# Algebra 1 Standard

2015 - 2016

#### Please Note:

All standards are designed to be learned by the end of the course. This guide represents a recommended time line and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course are best answered by the individual teacher.

Teachers may use a wide variety of instructional materials throughout their course. The Possible Resources listed may include the district adopted instructional resource or supplemental resources that align to the topic and/or standard. These Possible Resources provide sample problems that align to the topic/standard.

#### **Publisher Resource:**

Go Math - My.hrw.com

Username: 55S(student ID)

Password: FL + mmddyyyy of birth

### Other Course Supplemental Resources – by standard and Topic:

#### **Algebra Nation**

Username: Student ID

Password: mm/dd/yyyy of birth (include slashes)

## Study Island

Login: 55s(student #)

Password: first initial first name + first initial last name + mmddyyyy of birth

IXL Math – High School Standards

FSA Practice: (Please Note: these links work best in Firefox or Chrome)

**FSA Portal** 

**PARCC** 

**Smarter Balanced Portal** 

	Week	Major Concepts / Topics	Possible Resources
		Unit 1 – Working with Expressions	
		Module 3 – Expressions - Lesson 3.1 - Evaluation Expressions	Lesson 3.1 - Khan Academy
	1	Lesson 3.3 – Writing Expressions	Lesson 3.3 - Khan Academy
	_	Lesson 3.2 – Simplifying Expressions	Lesson 3.2 - Khan Academy
		Module 14 – Polynomials and Operations - Lesson 14.1 – Understanding Polynomials	Lesson 14.1 - Khan Academy
		Lesson 14.2 – Adding and Subtracting Polynomials	Lesson 14.2 - Khan Academy
		Unit 1 – Working with Expressions	
		Module 14 – Polynomials and Operations - Lesson 14.2 – Adding and Subtracting Polynomials	
	2	Lesson 14.3 – Multiplying Polynomials by Monomials	Lacass 44.2 Mhan Asadanni
		Lesson 14.4 – Multiplying Polynomials	Lesson 14.3 - Khan Academy
		Assessment	Lesson 14.4 - Khan Academy
		Unit 2 – Solving Equations and Inequalities in One Variable	
		Algebra Nation Topic - Equations True or False	Locaco A 1 Maria A and array
	3	Module 4 – Equations and Inequalities in One Variable - Lesson 4.1 – Equations in One Variable	Lesson 4.1 - <u>Khan Academy</u>
		Lesson 4.2 – Inequalities in One Variable	Lesson 4.2 - Khan Academy
Ouarter 1		Algebra Nation Solving Compound Inequalities	Lesson 4.2 - Midil Academy
Aug 10 – Oct 16		Unit 2 – Solving Equations and Inequalities in One Variable	
		Algebra Nation Topic - Solving Absolute Value Equations and Inequalities	
	4	Algebra Nation Topic - Solving Equations Using the Zero Product Property	
		Algebra Nation Topic - Equations with Variable in the Denominator	
		Algebra Nation Topic - Solving Equations in Real-Life Situations	
		Unit 2 – Solving Equations and Inequalities in One Variable	
		• Module 4 – Equations and Inequalities in One Variable - Lesson 4.3 – Solving for a Variable	Lesson 4.3 - Khan Academy
	5	Assessment	
		Unit 3 – Solving Equations	
		Module 5 – Equations in Two Variables and Functions - Lesson 5.1 – Equations in Two Variables	Lesson 5.1 - Khan Academy
		Unit 3 – Solving Equations	Lesson 6.1 - Khan Academy
		Module 6 – Linear Functions - Lesson 6.1 Linear Functions	Lesson 6.2 - Khan Academy
	6	Lesson 6.2 Using Intercepts	Lesson 6.3 - Khan Academy
		Lesson 6.3 Using Slope	Lesson 6.4 - Khan Academy
		Lesson 6.4 Slope Intercept Form	
		Unit 3 – Solving Equations	
	7	Module 6 – Linear Functions - Lesson 6.4	
		• Quiz	

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	Module 7 – Building Linear Functions - Lesson 7.4 Linear Inequalities in Two Variables	Lesson 7.4 - Khan Academy
	• Module 9 – Systems of Equations and Inequalities - Lesson 9.1 Solving Linear Systems by Graphing	Lesson 9.1 - Khan Academy
 	Unit 3 – Solving Equations	
	Module 9 – Systems of Equations and Inequalities - Lesson 9.2 Solving Linear Systems by	Lesson 9.2 - Khan Academy
8	Substitution	
	Lesson 9.3 Solving Linear Systems by Adding or Subtracting	Lesson 9.3 - Khan Academy
	Lesson 9.4 Solving Linear Systems by Multiplying	Lesson 9.4 - Khan Academy
	Unit 3 – Solving Equations	
9	Module 9 – Systems of Equations and Inequalities - Lesson 9.5 Solving Systems of Linear	Lesson 9.5 - Khan Academy
Э	Inequalities	
	Assessment	

	Week	Major Concepts / Topics	Possible Resources
		Unit 4 - Statistics	
		Module 13 – Data Displays - Lesson 13.2 Data Distributions and Outliers	Lesson 13.2 - Khan Academy
	1	Lesson 13.3 Histograms	Lesson 13.3 - Khan Academy
		Lesson 13.4 Box Plots	Lesson 13.4 - Khan Academy
		Lesson 13.1 Measures of Center and Spread	Lesson 13.1 - Khan Academy
		Unit 4 - Statistics	
		Module 13 – Data Displays - Lesson 13.1 Measures of Center and Spread	
	2	Lesson 13.2 Data Distributions and Outliers	
	2	Module 12 – Descriptive Statistics - Lesson 12.1 Two Way Frequency Table	Lesson 12.1 - Khan Academy
		Lesson 12.2 Relative Frequency	Lesson 12.2 - Khan Academy
		Assessment	
		Unit 5 – Introduction to Functions	
		Module 5 – Equations in Two Variables and Functions - Lesson 5.3 Sequences	Lesson 5.3 - Khan Academy
	3	Module 6 – Linear Functions - Lesson 6.7 Writing Linear Functions	Lesson 6.7 - Khan Academy
		Module 7 – Building Linear Functions - Lesson 7.1 Arithmetic Sequences	Lesson 7.1 - Khan Academy
		Module 5 – Equations in Two Variables and Functions - Lesson 5.2 Representing Functions	Lesson 5.2 - Khan Academy
Quarter 2		Unit 5 – Introduction to Functions	
Oct 20 – Dec 18	4	Algebra Nation Topic – Representing, Naming and Solving Functions	
30010		Algebra Nation Topic – Graphs of Functions	
		Unit 5 – Introduction to Functions	
	5	Module 6 – Linear Functions - Lesson 6.6 Transforming Linear Functions	Lesson 6.6 - Math Learning
		Assessment	
		Unit 6 – Piecewise-Defined Functions	
	6	Module 18 – Piecewise and Absolute Value Functions - Lesson 18.1 Piecewise Functions	Lesson 18.1 - Khan Academy
		Lesson 18.2 Absolute Value Functions	Lesson 18.2 - Khan Academy
		Unit 6 – Piecewise-Defined Functions	
		Module 18 – Piecewise and Absolute Value Functions - Lesson 18.2 Absolute Value Functions	
	7	Lesson 18.3 Transforming Absolute Value Functions	
	,	Assessment	Lesson 18.3 - Mrs. Heller
		Unit 7 – Radicals and Rational Exponents	
		Module 2 – Exponents and Real Numbers - Lesson 2.1 Radicals and Rational Exponents	Lesson 2.1 - Khan Academy
		Unit 7 – Radicals and Rational Exponents	
		Module 2 – Exponents and Real Numbers - Lesson 2.1 Radicals and Rational Exponents	
	8	Module 10 – Exponential Functions and Equations - Lesson 10.5 Equations Involving Exponents	Lesson 10.5 - Purple Math
		Lesson 10.2 Real Numbers	Lesson 10.2 - Khan Academy
		Module 19 – Square Root and Cube Root Functions - Lesson 19.1 Square Root Functions	Lesson 19.1 - Khan Academy

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	Lesson 19.2 Transforming Square Root Functions	Lesson 19.2 - Khan Academy
9	Semester Exams	

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	Week	Major Concepts / Topics	Possible Resources
	1	<ul> <li>Unit 8 - Quadratics</li> <li>Module 15 - Factoring Polynomials - Lesson 15.1 Factoring Polynomials</li> </ul>	Lesson 15.1 - Khan Academy
		• Lesson 15.2 Factoring x <sup>2</sup> + bx + c	Lesson 15.2 - Khan Academy
	2	<ul> <li>Unit 8 - Quadratics</li> <li>Module 15 - Factoring Polynomials - Lesson 15.2 Factoring x² + bx + c</li> <li>Module 16 - Solving Quadratic Equations - Lesson 16.2 Solving x² + bx + c = 0 by factoring</li> </ul>	Lesson 16.2 - Khan Academy
		Module 15 – Factoring Polynomials - Lesson 15.3 Factoring ax²+bx+c	Lesson 15.3 - Khan Academy
	3	<ul> <li>Unit 8 - Quadratics</li> <li>Module 16 - Solving Quadratic Equations - Lesson 16.3 Solving ax²+bx+c = 0 by factoring</li> <li>Assessment</li> </ul>	Lesson 16.3 - Khan Academy
	4	<ul> <li>Unit 8 - Quadratics</li> <li>Module 15 - Factoring Polynomials - Lesson 15.4 Factoring Special Products</li> <li>Module 16 - Solving Quadratic Equations - Lesson 16.1 Solving Quadratic Equations Using Square Roots</li> <li>Module 17 - Quadratic Functions - Lesson 17.1 Translating Quadratic Functions</li> <li>Lesson 17.2 Stretching, Shrinking and Reflecting Quadratic Functions</li> </ul>	Lesson 15.4 - Khan Academy Lesson 16.1 - Khan Academy Lesson 17.1 - Hotmath Lesson 17.2 - Hotmath
Quarter 3 Jan 6 – Mar 17	5	<ul> <li>Unit 8 - Quadratics</li> <li>Module 17 - Quadratic Functions - Lesson 17.2 Stretching, Shrinking and Reflecting Quadratic Functions</li> <li>Lesson 17.3 Combining Transformations of Quadratic Functions</li> <li>Lesson 17.4 Characteristics of Quadratic Functions</li> <li>Module 16 - Solving Quadratic Equations - Lesson 16.1 Solving Quadratic Equations Using Square Roots</li> </ul>	Lesson 17.3 - <u>Hotmath</u> Lesson 17.4 - <u>Khan Academy</u> Lesson 16.1 – <u>Khan Academy</u>
	6	<ul> <li>Unit 8 - Quadratics</li> <li>Module 16 - Solving Quadratic Equations - Lesson 16.4 Solving x² + bx + c = 0 by Completing the Square</li> <li>Lesson 16.5 Solving ax² + bx + c = 0 by Completing the Square</li> <li>Lesson 16.6 Quadratic Fomrula</li> </ul>	Lesson 16.4 - <u>Khan Academy</u> Lesson 16.5 - <u>Khan Academy</u> Lesson 16.6 - <u>Khan Academy</u>
	7	Unit 8 - Quadratics  • Algebra Nation Topic – Graphing Polynomial Functions  • Assessment	
	8	<ul> <li>Unit 9 - Data</li> <li>Module 8 - Modeling with Linear Functions - Lesson 8.1 Correlation</li> <li>Lesson 8.2 Fitting Lines to Data</li> <li>Lesson 8.3 Linear Regression</li> <li>Assessment</li> </ul>	Lesson 8.1 - <u>Khan Academy</u> Lesson 8.2 - <u>Khan Academy</u> Lesson 8.3 - <u>Stattrek</u>

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9	<ul> <li>Unit 10 – Exponential Functions</li> <li>Module 10 – Exponential Functions and Equations - Lesson 10.3 Geometric Sequences</li> <li>Lesson 10.1 Exponential Functions</li> </ul>	Lesson 10.3 - Khan Academy Lesson 10.1 - Khan Academy
10	<ul> <li>Unit 10- Exponential Functions</li> <li>Module 10 – Exponential Functions and Equations - Lesson 10.1 Exponential Functions</li> <li>Lesson 10.2 Exponential Growth and Decay</li> <li>Lesson 10.4 Transforming Exponential Functions</li> <li>Algebra Nation Topic – Real World Application</li> </ul>	Lesson 10.2 - <u>Khan Academy</u> Lesson 10.4 - <u>Study.com</u>
11	Assessment	

	Week	Major Concepts / Topics	Possible Resources
		Unit 11 – Elements of Modeling	
	1	Module 17 – Quadratic Functions - Lesson 17.6 Comparing Linear, Exponential and	Lesson 17.6 - Spohia.org
		Quadratic Models	Lesson 17.6 - <u>Spohia.org</u>
		Unit 11 – Elements of Modeling	
	2	Module 17 – Quadratic Functions - Lesson 17.6 Comparing Linear, Exponential and	
	_	Quadratic Models	
		Algebra Nation Topic – Key Features of Parent Function Graphs	
		Unit 11 – Elements of Modeling	
	3	Algebra Nation Topic – Key Features of Parent Function Graphs	Lesson 17.6 - Spohia.org ear, Exponential and ear,
		Algebra Nation Topic – Comparing Rate of Change for Linear, Quadratic and	
Quarter 4		Exponential Functions	
Mar 29 – May 26	4	Unit 11 – Elements of Modeling	
,		Algebra Nation Topic – Comparing Rate of Change for Linear, Quadratic and	
		Exponential Functions	
		Assessment	
	5	Standards Based Performance Tasks	Algebra 1 Standards – Florida Student
	6	Standards Based Performance Tasks	
	7	Standards Based Performance Tasks	··
	8	Standards Based Performance Tasks	
	9	Exam Week	