## Please Note:

All standards in the state course description 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:**

Pearson (select your grade and course level and use your active directory)

## **Other Course Supplemental Resources:**

Khan Academy (Algebra 1; program does not support Internet Explorer)

Math Nation (Clever – use your active directory; does not support Internet Explorer)

**FSA Portal** 

Algebra 1 EOC Test Item Specifications
Algebra 1 FSA Computer-Based Practice Test Answer Key

PARCC (Partnership for Assessment of Readiness for College and Careers) - Mathematics Practice Tests with Answer Keys

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	Week	Major Concepts / Topics	Possible Resources
	1	STEM project	Unit: Irrational numbers - Khan Academy
	8/31 – 9/4	1.1 Operations on real numbers	Rational vs. irrational expressions - Khan Academy
	5,52 5, 1	1.2 Solving linear equations	Sum and product of 2 rational #'s is rational – Khan Academy
			Produce of rational and irrational is irrational - Khan Academy
			Sum of rational and irrational is irrational - Khan Academy
			Sums and products of irrational numbers - Khan Academy
			Unit: Linear equations and graphs - Khan Academy
			Variables, expressions and equations - Khan Academy
	2	<ul> <li>Labor Day Holiday – 9/7</li> </ul>	Unit: Solving equations - Khan Academy
	9/7 – 9/11	<ul> <li>1.3 Solving equations with variables on both sides</li> </ul>	Variables on Both Sides – Khan Academy
Quarter 1	, ,	1.4 Literal equations and formulas	Intro to equations with variables on both sides - Khan Academy
Aug 31 - Oct 30			Solving an equation for a variable - Khan Academy
, and the second	3	1.5 Solving inequalities in one variable	Unit: Solving inequalities - <u>Khan Academy</u>
	9/14 – 9/18	1.6 Compound inequalities	Testing solutions to an inequality - Khan Academy
	, ,	1.7 Absolute value equations and inequalities	Plotting an inequality - Khan Academy
			One step inequality - Khan Academy
			Two step inequality - Khan Academy
			Inequalities with variables on both sides - Khan Academy
			Compound inequalities: OR - Khan Academy
			Compound inequalities: AND - Khan Academy
			Unit: Absolute value and piecewise functions - <u>Khan Academy</u>
			Graphing absolute value functions – Khan Academy
	4	Remediation	
	9/21 – 9/25	Review	
		Assessment	Unit: Forms of linear equations - <u>Khan Academy</u>
		2.1 Slope intercept form	Slope intercept form – <u>Khan Academy</u>
	5	2.2 Point slope form	Point slope form - Khan Academy
	9/28 – 10/2	2.3 Standard form	Standard form - Khan Academy
	6	Remediation	
	10/5 – 10/9	Review	
		Assessment	
	7	• PSAT 10/14	Unit: functions - <u>Khan Academy</u>
	10/12 – 10/16		Relations and functions - Khan Academy
		3.2 Linear Functions	What is a function - Khan Academy

		3.3 Transforming linear functions	Recognizing linear functions - Khan Academy
			Linear transformations - Khan Academy
	8	3.4 Arithmetic sequences	Unit: Sequences - <u>Khan Academy</u>
1	10/19 – 10/23	<ul> <li>3.5 Scatter plots and lines of best fit</li> </ul>	Intro to arithmetic sequences – Khan Academy
		<ul> <li>3.6 Analyzing lines of fit</li> </ul>	Unit: Data and modeling - <u>Khan Academy</u>
			Scatter Plots and Lines of Fit - Khan Academy
	9	Remediation	
1	10/26 – 10/30	• Review	
		<ul> <li>Assessment</li> </ul>	

	Week		Major Concepts / Topics	Possible Resources
	1	•	Teacher Planning Day 11/3	Unit: Systems of equations - <u>Khan Academy</u>
	11/2 – 11/6	•	4.1 Solving systems by graphing	Solving systems with graphing - Khan Academy
		•	4.2 Solving systems by substitution	Solving Systems by Substitution – Khan Academy
	2	•	Veterans Day 11/11	
	11/9 – 11/13	•	4.3 Solving systems by elimination	Solving Systems by Elimination – Khan Academy
	3	•	4.4 Linear inequalities	Inequalities with variables on both sides - Khan Academy
	11/16 – 11/20	•	4.5 Systems of linear inequalities	Systems of inequalities - Khan Academy
	4	•	Remediation	
	11/23 – 11/27	•	Review	
		•	Thanksgiving Holiday 11/25 - 11/27	
	5	•	Assessment	Unit: Exponents and radicals - <u>Khan Academy</u>
	11/30 – 12/4	•	6.1 Rational exponents and properties of exponents	Exponent properties: products - Khan Academy
Quarter 2		•	6.2 Exponential functions	Exponent properties: parentheses - Khan Academy
Nov 2 - Jan 25*		•	6.3 Exponential growth and decay	Exponent properties: quotients - Khan Academy
100V Z - Jail 23				Negative exponents - Khan Academy
				Multiplying and dividing powers - Khan Academy
				Powers of products and quotients - Khan Academy
				Powers of zero - Khan Academy
				Intro to exponential functions - Khan Academy
				Unit: Exponential growth and decay - <u>Khan Academy</u>
		ļ		Graphing exponential growth and decay - Khan Academy
	6	•	Remediation	
	12/7 – 12/11	•	Review	
		•	Assessment	
	7	•		Unit: Sequences - <u>Khan Academy</u>
	12/14 – 12/18	•		Intro to geometric sequences – Khan Academy
		•	Winter Break 12/21 – 1/1	Transformations of exponential functions - Khan Academy
	8	•	6.5 transformations of exponential functions	
	1/4 – 1/8	•	Remediation	
		•	Review	
	9	•	Assessment	Unit: Quadratics: Multiplying and factoring - <u>Khan Academy</u>
	1/11 – 1/15	•	7.1 Adding and subtracting polynomials	Adding polynomials – <u>Khan Academy</u>

	7.2 Multiplying polynomials	Intro to multiplying polynomials – <u>Khan Academy</u>
10 1/18 – 1/22*	<ul> <li>Martin Luther King Jr. Holiday 1/18</li> <li>7.3 Multiplying special cases</li> <li>7.4 Factoring polynomials</li> <li>*Second Quarter/First Semester Ends – Monday, January 25, 2021</li> </ul>	Special products (x+a)(x-a) – <u>Khan Academy</u> Squaring binomials - <u>Khan Academy</u> Intro to factoring – <u>Khan Academy</u>

	Week	Major Concepts / Topics	Possible Resources
	1	Teacher Planning Day 1/29	Unit: Factorization – <u>Khan Academy</u>
	<b>1/25*</b> – 1/29	7.5 Factoring	Factoring with the distributive property – Khan Academy
			Taking a common factory - Khan Academy
			Common binomial factor - Khan Academy
	2	7.6 Factoring	Factoring as (x+a)(x+b) - Khan Academy
	2/1 – 2/5	7.7 Factoring special cases	Intro to factoring by grouping - Khan Academy
			Difference of squares - Khan Academy
			Perfect squares - <u>Khan Academy</u>
			Special product forms - <u>Khan Academy</u>
	3	Remediation	
	2/8 – 2/12	Review	
	4	Presidents Day Holiday 2/15	
	2/15 – 2/19	Review	Unit: Quadratic functions and equations - <u>Khan Academy</u>
		Assessment	Parabolas intro - <u>Khan Academy</u>
Quarter 3		8.1 Key features of quadratic functions	Forms and features of quadratics – <u>Khan Academy</u>
Jan 26 – Apr 8		8.2 Quadratic functions in vertex form	Intro to vertex form – Khan Academy
· ·	5	8.3 Quadratic functions in standard form	Graphing quadratics: standard form - Khan Academy
	2/22 – 2/26	8.4 Modeling with quadratic functions	
	6	8.5 Linear exponential and quadratic models	
	3/1 – 3/5	Remediation	
	7	Review	
	3/8 – 3/12	Assessment	
		9.1 Solving quadratic equations     2.2 Solving quadratic equations	Calcing and destination by factoring When Academy
		9.2 Solving quadratic equations by factoring	Solving quadratics by factoring - Khan Academy
	8	9.3 Rewriting radical expressions     Spring Break 3/17 - 3/10	Intro to rational exponents - Khan Academy
	3/15 – 3/19 9	<ul> <li>Spring Break 3/17 – 3/19</li> <li>9.4 Solving quadratic equations using square roots</li> </ul>	Rewriting roots as rational exponents - Khan Academy
	9 3/22 – 3/26	<ul><li>9.4 Solving quadratic equations using square roots</li><li>9.5 Completing the square</li></ul>	Solving quadratics by taking square roots – <u>Khan Academy</u> Completing the square – <u>Khan Academy</u>
	10	9.6 The quadratic formula and the discriminant	Quadratic formula - Khan Academy
	3/29 – 4/2	Remediation	Discriminant (practice) - Khan Academy
	3/23-4/2	Holiday 4/2	Discriminant (practice) - Mian Academy
	L	Tioliday 4/2	

11	Remediation	
4/5 – 4/9	Review	
	Assessment	
	Teacher Planning Day 4/9	

	Week	Major Concepts / Topics	Possible Resources
	1	5.1 Absolute value function	Unit: Absolute value and piecewise functions - Khan Academy
	4/12 – 4/16	• 5.2 Piece-wise functions	Graphing absolute value – Khan Academy
		• 5.3 Step functions	Intro to piece-wise functions – Khan Academy
		• 5.4 Transformations of piece-wise functions	Domain and range of step functions - Khan Academy
			Shifting absolute value graphs - Khan Academy
	2	Remediation/Review	
	4/19 – 4/23	Assessment	
		10.1 Square root function	Graphing square root and cube root functions - Khan Academy
		• 10.2 Cube root function	
		<ul> <li>10.3 Analyzing functions graphically</li> </ul>	
	3	10.4 Translations of functions	Identifying function transformations - Khan Academy
	4/26 – 4/30	• 10.5 Compressions and stretches of functions	Reflecting and compressing functions - Khan Academy
O		• 10.6 Operations of functions	Identifying horizontal squash - Khan Academy
Quarter 4		Remediation/Review	
Apr 12 – Jun 10	4	Assessment	
	5/3 – 5/7	11.1 Analyzing data displays	
	May 3 - FSA Testing	11.2 Comparing data sets	
	Window Opens		
	5	11.3 Interpreting the sets of data displays	
	5/10 – 5/14	11.4 Standard deviation	Two way frequency tables (8th grade standards) - Khan
		• 11.5 Two-way frequency tables	<u>Academy</u>
			Two-way frequency tables (practice) - Khan Academy
	6	Remediation	
	5/17 – 5/21	Review	
		Assessment	
		Course Standards Review	
	7	Course Standards Review	
	5/24 – 5/28		
	8	Memorial Day Holiday 5/31	
	5/31 – 6/4	Course Standards Review	
	9	Course Standards Review	
	6/7 – 6/10		