## 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	1.1 Operations on real numbers	Unit: Irrational numbers - Khan Academy
	8/31 – 9/4	1.2 Solving linear equations	Rational vs. irrational expressions - Khan Academy
		• 1.3 Solving equations with variables on both sides	Sum and product of 2 rational #'s is rational – Khan Academy
		1.4 Literal equations and formulas	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	Labor Day Holiday – 9/7	Unit: Solving equations - <u>Khan Academy</u>
	9/7 – 9/11	1.5 Solving inequalities in one variable	Variables on Both Sides – <u>Khan Academy</u>
Quarter 1		1.6 Compound inequalities	Intro to equations with variables on both sides - Khan Academy
Aug 31 - Oct 30		1.7 Absolute value equations and inequalities	Solving an equation for a variable - Khan Academy
			Unit: Solving inequalities - <u>Khan Academy</u>
			Testing solutions to an inequality - Khan Academy
			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 - <u>Khan Academy</u>
			Compound inequalities: AND - Khan Academy
			Unit: Absolute value and piecewise functions - <u>Khan Academy</u>
			Graphing absolute value functions – Khan Academy
	3	Remediation/Review	
	9/14 – 9/18	Assessment	Unit: Forms of linear equations - <u>Khan Academy</u>
		2.1 Slope intercept form	Slope intercept form – <u>Khan Academy</u>
	4	2.2 Point slope form	Point slope form - <u>Khan Academy</u>
	9/21 – 9/25	2.3 Standard form	Standard form - Khan Academy
	5	Remediation	
	9/28 – 10/2	Review	Unit: functions - <u>Khan Academy</u>
		Assessment     Assessment	Relations and functions - <u>Khan Academy</u>
		3.1 Relations and Functions	What is a function - Khan Academy

6 10/5 – 10/9	<ul> <li>3.2 Linear Functions</li> <li>3.3 Transforming linear functions</li> <li>3.4 Arithmetic sequences</li> </ul>	Recognizing linear functions - <u>Khan Academy</u> Linear transformations - <u>Khan Academy</u> Unit: Sequences - <u>Khan Academy</u> Intro to arithmetic sequences - <u>Khan Academy</u>
7 10/12 – 10/16	<ul> <li>PSAT 10/14</li> <li>3.5 Scatter plots and lines of best fit</li> <li>3.6 Analyzing lines of fit</li> <li>Remediation</li> <li>Review</li> </ul>	Unit: Data and modeling - <u>Khan Academy</u> Scatter Plots and Lines of Fit - <u>Khan Academy</u>
8 10/19 – 10/23	Assessment	Unit: Systems of equations - Khan Academy Solving systems with graphing - Khan Academy Solving systems by substitution - Khan Academy
9 10/26 – 10/30	<ul><li>4.2 Solving systems by substitution</li><li>4.3 Solving systems by elimination</li></ul>	Solving systems by elimination – <u>Khan Academy</u>

	Week	Major Concepts / Topics	Possible Resources
	1	Teacher Planning Day 11/3	
	11/2 – 11/6	<ul> <li>4.4 Linear inequalities</li> </ul>	Inequalities with variables on both sides - Khan Academy
		<ul> <li>4.5 Systems of linear inequalities</li> </ul>	Systems of inequalities - Khan Academy
	2	<ul><li>Veterans Day 11/11</li></ul>	
	11/9 – 11/13	Remediation	
		• Review	
		<ul> <li>Assessment</li> </ul>	
	3	• 6.1 Rational exponents and properties of exponents	Unit: Exponents and radicals - <u>Khan Academy</u>
	11/16 – 11/20	6.2 Exponential functions	Exponent properties: products - Khan Academy
		<ul> <li>6.3 Exponential growth and decay</li> </ul>	Exponent properties: parentheses - Khan Academy
			Exponent properties: quotients - Khan Academy
			Negative exponents - Khan Academy
Quarter 2			Multiplying and dividing powers - Khan Academy
Nov 2 - Jan 25*			Powers of products and quotients - Khan Academy
NOV Z - Jail 25			Powers of zero - <u>Khan Academy</u>
			Intro to exponential functions - Khan Academy
			Unit: Exponential growth and decay - <u>Khan Academy</u>
			Graphing exponential growth and decay - Khan Academy
	4	<ul> <li>Remediation</li> </ul>	
	11/23 – 11/27	• Review	
		<ul> <li>Assessment</li> </ul>	
		<ul> <li>Thanksgiving Holiday 11/25 - 11/27</li> </ul>	
	5	<ul> <li>6.4 Geometric sequences</li> </ul>	Unit: Sequences - <u>Khan Academy</u>
	11/30 – 12/4	<ul> <li>6.5 Transformations of exponential functions</li> </ul>	Intro to geometric sequences – Khan Academy
		Remediation	Transformations of exponential functions - Khan Academy
	6	• Review	Unit: Quadratics: Multiplying and factoring - Khan Academy
	12/7 – 12/11	<ul> <li>Assessment</li> </ul>	Adding polynomials – Khan Academy
		<ul> <li>7.1 Adding and subtracting polynomials</li> </ul>	
	7	7.2 Multiplying polynomials	Intro to multiplying polynomials – Khan Academy
	12/14 – 12/18	<ul> <li>7.3 Multiplying special cases</li> </ul>	Special products (x+a)(x-a) – Khan Academy
		<ul> <li>Winter Break 12/21 – 1/1</li> </ul>	Squaring binomials - Khan Academy

8 1/4 – 1/4	<ul> <li>7.4 Factoring polynomials</li> <li>7.5 Factoring</li> </ul>	Intro to factoring – <u>Khan Academy</u> <i>Unit: Factorization – <u>Khan Academy</u></i> Factoring with the distributive property – <u>Khan Academy</u> Taking a common factory - <u>Khan Academy</u> Common binomial factor - Khan Academy
9 1/11 – 1/	<ul> <li>7.6 Factoring</li> <li>7.7 Factoring special cases</li> </ul>	Factoring as (x+a)(x+b) - Khan Academy Intro to factoring by grouping - Khan Academy Difference of squares - Khan Academy Perfect squares - Khan Academy Special product forms - Khan Academy
10 1/18 – 1/2	<ul> <li>Martin Luther King Jr. Holiday 1/18</li> <li>Remediation</li> <li>Review</li> <li>Assessment</li> <li>*Second Quarter/First Semester Ends – Monda January 25, 2021</li> </ul>	у,

	Week	Major Concepts / Topics	Possible Resources
	1	8.1 Key features of quadratic functions	Unit: Quadratic functions and equations - Khan Academy
	<b>1/25*</b> – 1/29	8.2 Quadratic functions in vertex form	Parabolas intro - Khan Academy
		Teacher Planning Day 1/29	Forms and features of quadratics – Khan Academy
			Intro to vertex form – Khan Academy
	2	8.3 Quadratic functions in standard form	Graphing quadratics: standard form - Khan Academy
	2/1 – 2/5	8.4 Modeling with quadratic functions	
		8.5 Linear exponential and quadratic models	
	3	Remediation	
	2/8 – 2/12	Review	
		Assessment	
	4	Presidents Day Holiday 2/15	
	2/15 – 2/19	9.1 Solving quadratic equations	Solving quadratics by factoring - Khan Academy
		9.2 Solving quadratic equations by factoring	Intro to rational exponents - Khan Academy
		9.3 Rewriting radical expressions	Rewriting roots as rational exponents - Khan Academy
Quarter 3	5	9.4 Solving quadratic equations using square roots	Solving quadratics by taking square roots – Khan Academy
Jan 26 – Apr 8	2/22 – 2/26	9.5 Completing the square	Completing the square – Khan Academy
3dii 20 7 (pi 0		9.6 The quadratic formula and the discriminant	Quadratic formula - <u>Khan Academy</u>
		9.7 Solving Systems of Linear and Quadratic Equations	Discriminant (practice) - Khan Academy
	6	Remediation	
	3/1 – 3/5	Review	
		Assessment	
		5.1 Absolute value function	Unit: Absolute value and piecewise functions - <u>Khan Academy</u>
			Graphing absolute value – <u>Khan Academy</u>
	7	5.2 Piece-wise functions	Intro to piece-wise functions – <u>Khan Academy</u>
	3/8 – 3/12	• 5.3 Step functions	Domain and range of step functions - Khan Academy
		5.4 Transformations of piece-wise functions	Shifting absolute value graphs - Khan Academy
	8	Remediation/Review	
	3/15 – 3/19	Assessment	
		• Spring Break 3/17 – 3/19	
	9	10.1 Square root function	Graphing square root and cube root functions - Khan
	3/22 – 3/26	10.2 Cube root function	Academy
		10.3 Analyzing functions graphically	

10	10.4 Translations of functions	Identifying function transformations - Khan Academy
3/29 – 4/2	<ul> <li>10.5 Compressions and stretches of functions</li> </ul>	Reflecting and compressing functions - Khan Academy
	<ul> <li>10.6 Operations of functions</li> </ul>	Identifying horizontal squash - Khan Academy
	Holiday 4/2	
11	<ul> <li>10.7 Inverse Operations</li> </ul>	
4/5 – 4/9	<ul> <li>Remediation</li> </ul>	
	Review	
	<ul> <li>Assessment</li> </ul>	
	<ul> <li>Teacher Planning Day 4/9</li> </ul>	

	Week	Major Concepts / Topics	Possible Resources
	1 4/12 – 4/16	<ul> <li>11.1 Analyzing data displays</li> <li>11.2 Comparing data sets</li> <li>11.3 Interpreting the sets of data displays</li> </ul>	
	2 4/19 – 4/23 3 4/26 – 4/30	<ul> <li>11.3 Interpreting the sets of data displays</li> <li>11.4 Standard deviation</li> <li>11.5 Two-way frequency tables</li> <li>11.6 Data Distributions</li> <li>11.7 Normal Distributions</li> <li>Remediation</li> <li>Review</li> </ul>	Two way frequency tables (8th grade standards) - Khan Academy Two-way frequency tables (practice) - Khan Academy
Quarter 4 Apr 12 – Jun 10	4 5/3 – 5/7 May 3 - FSA Testing Window Opens	<ul> <li>Assessment</li> <li>12.1 Polynomial Identities</li> <li>12.2 Dividing Polynomials</li> <li>12.3 Inverse Variation and the Reciprocal Functions</li> <li>12.4 Graphing Rational Functions</li> </ul>	Polynomial Identities - Khan Academy Dividing polynomials - Khan Academy Inverse variation - Khan Academy Graphing rational functions - Khan Academy
	5 5/10 – 5/14	<ul> <li>12.5 Multiplying and Dividing Rational Expressions</li> <li>12.6 Adding and Subtracting Rational Expressions</li> <li>12.7 Solving Rational Equations</li> <li>12.8 Solving Radical Equations</li> <li>Remediation/Review</li> <li>Assessment</li> </ul>	Multiplying and dividing rational expressions - Khan Academy Adding and subtracting rational expressions - Khan Academy Intro to rational equations - Khan Academy Intro to square root equations - Khan Academy
	6 5/17 – 5/21 7 5/24 – 5/28	<ul><li>Course Standards Review</li><li>Course Standards Review</li></ul>	
	8 5/31 – 6/4 9 6/7 – 6/10	<ul> <li>Memorial Day Holiday 5/31</li> <li>Course Standards Review</li> <li>Course Standards Review</li> </ul>	