## 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 timeline 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:**

CollegePrepAlgebra.com

**Other Course Supplemental Resources:** 

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	Week	Major Concepts / Topics	Possible Resources
Quarter 1 Aug 16 – Oct 15	1 8/16 – 8/20	<ul> <li>Lesson 1.1 - Real Numbers</li> <li>Lesson 1.2 - Add &amp; Subtract Integers</li> <li>Lesson 1.3 - Multiplying &amp; Dividing Integers and Lesson</li> <li>Lesson 1.4 - Operations with Rational Numbers</li> </ul>	Adding numbers with different signs - <u>Khan</u> <u>Academy</u> Multiplying and dividing negative numbers - <u>Khan Academy</u>
	2 8/23 - 8/27	<ul> <li>Topic 20 - Real number operations</li> <li>Lesson 1.5 - Exponents and Properties of Real Numbers</li> <li>Topic 5 - Repeating Decimals</li> <li>Remediate/Review</li> <li>Assess</li> </ul>	Intro to exponents - <u>Khan Academy</u> Convert fraction to repeating decimal - <u>Khan</u> <u>Academy</u>
	3 8/30 – 9/3	<ul> <li>Lesson 2.1 - Writing and Evaluating Algebraic Expressions</li> <li>Lesson 2.2 - Simplifying Algebraic Expressions</li> <li>Lesson 2.3 - Algebra and Problem Solving</li> <li>Lesson 2.4 - Introduction to Equations</li> </ul>	Evaluating an expression with one variable - <u>Khan Academy</u> Evaluating expressions with two variables - <u>Khan Academy</u> Intro to combining like terms - <u>Khan Academy</u> Variables, expressions and equations - <u>Khan</u> <u>Academy</u>
	4 9/6 – 9/10	<ul> <li>Labor Day Holiday – 9/6</li> <li>Remediate/Review</li> <li>Assess</li> <li>Lesson 3.1 - Solving Linear Equations</li> </ul>	Why we do the same thing to both sides - <u>Khan Academy</u>
	5 9/13 – 9/17	<ul> <li>Interims Issued – 9/14</li> <li>Lesson 3.2 - Equations that Reduce to Linear Form</li> <li>Lesson 3.3 - Problem Solving with Percents</li> </ul>	Meaning of percent - <u>Khan Academy</u>
	6 9/20 – 9/24	<ul> <li>Lesson 3.5 - Geometric and Scientific Applications</li> <li>Lesson 3.6 - Linear Inequalities</li> </ul>	Solving and graphing linear inequalities - <u>Khan</u> <u>Academy</u>
	7 9/27 – 10/1	<ul> <li>Lesson 3.7 - Absolute Value Equations and Inequalities</li> <li>Remediate/Review</li> <li>Assess</li> <li>Lesson 4.1 - Ordered Pairs and Graphs</li> </ul>	Intro to absolute value equations and graphs - <u>Khan Academy</u> Intro to absolute value inequalities - <u>Khan</u> <u>Academy</u>

8 10/4 – 10/8	<ul> <li>Topic 10: Partitioning Segments</li> <li>Lesson 4.2 - Graphs of Equations in Two variables</li> </ul>	Plotting a point (ordered pair) - <u>Khan Academy</u> Dividing line segments - <u>Khan Academy</u> Two-variable linear equations intro - <u>Khan</u> <u>Academy</u>
9 10/11 – 10/15	<ul> <li>PSAT/NMSQT – 10/13</li> <li>Lesson 4.3 - Relations, Functions, and Graphs</li> <li>Topic 16 - Graphing Proportional Relationships</li> <li>Lesson 4.4 - Slope and Graphs of Linear Equations</li> <li>Topic 19 – The Distance Formula</li> </ul>	Relations and functions - <u>Khan Academy</u> Graphing proportional relationships from an equation - <u>Khan Academy</u> Graphing proportional relationships from a table - <u>Khan Academy</u> Intro to slope - <u>Khan Academy</u> Graphing a linear equation - <u>Khan Academy</u>

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Quarter 2 Oct 18 – Dec 21	1 10/18 - 10/22	<ul> <li>Teacher Planning Day – 10/18</li> <li>Topic 9 - Step and Piecewise functions</li> <li>Lesson 4.5 - Equations of Lines</li> <li>Topic 11 - Scatterplots and Lines of Fit</li> </ul>	Distance formula - <u>Khan Academy</u> Intro to piecewise functions - <u>Khan</u> <u>Academy</u>
	2 10/25 – 10/29	<ul> <li>Report Cards – 10/26</li> <li>Lesson 4.6 - Graphs of linear Inequalities</li> <li>Remediate/Review</li> <li>Assess</li> </ul>	Line of best fit - <u>Khan Academy</u> Intro to graphing two-variable inequalities - <u>Khan Academy</u>
	3 11/1 – 11/5	<ul> <li>Lesson 5.1 - Integer Exponents, and Scientific Notation</li> <li>Lesson 5.2 - Adding and Subtracting Polynomials</li> </ul>	Intro to exponents - <u>Khan Academy</u> Scientific notation - <u>Khan Academy</u> Adding and subtracting polynomials - <u>Khan</u> <u>Academy</u>
	4 11/8 - 11/12	<ul> <li>Veterans Day 11/11</li> <li>Lesson 5.3 - Multiplying Polynomials; Special Products</li> <li>Lesson 5.4 - Diving Polynomials and Synthetic Division</li> </ul>	
	5 11/15 – 11/19	<ul> <li>Interims Issued – 11/16</li> <li>Remediate/Review</li> <li>Assess</li> <li>Lesson 6.1 - Factoring Polynomials with Common Factors</li> </ul>	Multiplying monomials - <u>Khan Academy</u> Multiplying monomials by polynomials - <u>Khan Academy</u> Multiplying binomials - <u>Khan Academy</u> Special products (x+a)(x-a) - <u>Khan Academy</u> Intro to polynomial synthetic division - <u>Khan Academy</u>
	6 11/22 – 11/26	<ul> <li>Thanksgiving Holiday 11/24 – 11/26</li> </ul>	Unit: Polynomial factorization - <u>Khan</u> <u>Academy</u> Factoring quadratics (x+a)(x+b) - <u>Khan</u> <u>Academy</u> Factoring quadratics: common factor and grouping - <u>Khan Academy</u>
	7 11/29 – 12/3	<ul> <li>Lesson 6.2 - Factoring Trinomials</li> <li>Lesson 6.3 - More about Factoring Trinomials</li> </ul>	Factoring trinomials - <u>Khan Academy</u>

8 12/6 – 12/10	<ul> <li>Lesson 6.4 – Factoring Polynomials with Special Forms</li> <li>Polynomial Identities and Pythagorean Triples Review</li> <li>Lesson 6.5 - Solving Polynomial Equations by Factoring</li> </ul>	Difference of squares - <u>Khan Academy</u> Polynomial identities - <u>Khan Academy</u> Solving quadratics by factoring - <u>Khan</u> <u>Academy</u>
9 12/13 – 12/17	<ul> <li>Remediate/Review</li> <li>Assess</li> <li>Standards Review</li> </ul>	
10 12/20 – 12/24	<ul> <li>Second Quarter/First Semester Ends – 12/21</li> <li>Winter Break – 12/22 –1/4</li> <li>Midterm</li> <li>Standards Review</li> </ul>	

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	Week	Major Concepts / Topics	Possible Resources
	1	Teacher Planning Day – 1/5	Into to rational expression
	1/5 – 1/7	Lesson 7.1 Rational Expressions and Functions	simplification - Khan Academy
Quarter 3 Jan 6 – Mar 10	2 1/10 – 1/14	<ul> <li>Lesson 7.2 - Multiplying and Dividing Rational Expressions</li> <li>Lesson 7.3 - Adding and Subtracting Rational Expressions</li> </ul>	Multiplying and dividing rational expressions: monomials - Khan AcademyMultiplying rational expressions - Khan AcademyDividing rational expressions - Khan AcademyAdding and subtracting rational expressions: like denominators - Khan AcademyAcademy 
	3 1/17 – 1/21	<ul> <li>Martin Luther King Jr. Holiday – 1/17</li> <li>Report Cards – 1/19</li> <li>Lesson 7.4 - Complex Fractions</li> </ul>	Simplifying complex fractions - <u>Khan</u> <u>Academy</u> Rational equations intro - <u>Khan</u> <u>Academy</u>
	4 1/24 – 1/28	<ul> <li>Lesson 7.5 – Solving Rational Equations</li> <li>Topic 15 – Graphing Rational Function</li> </ul>	Graphing rational functions part 1 - <u>Khan Academy</u> Graphing rational functions part 2 - <u>Khan Academy</u> Graphing rational functions part 3 - <u>Khan Academy</u> Graphing rational functions part 4 - <u>Khan Academy</u>
	5 1/31 – 2/4	<ul> <li>Remediate/Review</li> <li>Assess</li> <li>Lesson 8.1 - Solving systems of Equations by Graphing and Substitution</li> </ul>	Solving systems of equations with graphing - <u>Khan Academy</u> Systems of equations with substitution - <u>Khan Academy</u>

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	6	Teacher Inservice – 2/7	Systems of equations with elimination
	2/7 – 2/11	<ul> <li>Interims Issued – 2/8</li> </ul>	- <u>Khan Academy</u>
	2/7 - 2/11	<ul> <li>Lesson 8.2 - Solving Systems of Equations by Elimination</li> </ul>	
	7	Lesson 8.6 – Systems of linear Inequalities	Into to graphing 2-variable
	2/14 – 2/18	Remediate/Review	inequalities - Khan Academy
		<ul> <li>Presidents Day Holiday – 2/21</li> </ul>	Radical and rational exponents - Khan
	8	Assess	Academy
	2/21 – 2/25	<ul> <li>Lesson 9.1 - Radicals and Rational Exponents</li> </ul>	Simplifying square roots - Khan
		· · · · · · · · · · · · · · · · · · ·	<u>Academy</u>
	9	<ul> <li>Lesson 9.2 – Simplifying Radical Expressions</li> </ul>	Graphing square and cube root
	2/28 – 3/4	<ul> <li>Topic 18 - Graphing Square and Cube Root Functions</li> </ul>	functions - <u>Khan Academy</u>
	2/20 - 3/4	<ul> <li>Lesson 9.5 – Radical Equations and Applications</li> </ul>	
	10	<ul> <li>Teacher Planning Day – 3/11</li> </ul>	
	10	Remediate/Review	
	3/7 – 3/11	Assess	

	Week	Major Concepts / Topics	Possible Resources
	1 3/14 - 3/18	SPRING BREAK – NO SCHOOL	
	2 3/21 – 3/25	<ul> <li>Lesson 10.1 - Solving Quadratic Equations</li> <li>Lesson 10.2 - Completing the Square</li> </ul>	Zero product property - <u>Khan</u> <u>Academy</u> Solving quadratics by taking square roots - <u>Khan Academy</u> Completing the square - <u>Khan</u> <u>Academy</u>
	3 3/28 – 4/1	<ul> <li>Report Cards – 3/29</li> <li>Lesson 10.3 – Quadratic Formula Lesson</li> <li>Lesson 10.4 – Graphs of Quadratic Functions</li> </ul>	Quadratic formula - <u>Khan</u> <u>Academy</u> Interpret a quadratic graph - <u>Khan Academy</u>
Quarter 4 Mar 14 – June 2	4 4/4 - 4/8	<ul> <li>Transformations of Quadratics</li> <li>Topic 8 – Symmetry and Behavior of Graphs</li> </ul>	Intro to parabola transformations - <u>Khan</u> <u>Academy</u> Vertex and axis of symmetry of parabola - <u>Khan Academy</u>
	5 4/11 – 4/15	<ul> <li>Holiday – 4/15</li> <li>Average Rate of Change</li> <li>Lesson 10.5 – Applications of Quadratic Equations</li> </ul>	Introduction to average rate of change - <u>Khan Academy</u> Quadratic word problem: ball - <u>Khan Academy</u>
	6 4/18 – 4/22	<ul> <li>Holiday – 4/18</li> <li>Remediate/Review</li> <li>Assess</li> <li>Lesson 11.1 - Exponential Functions</li> </ul>	Intro to exponential functions - <u>Khan Academy</u>
	7 4/25 – 4/29	<ul> <li>Interims Issued – 4/26</li> <li>Lesson 11.6 - Applications</li> <li>Lesson 11.2 – Composite Functions</li> </ul>	Intro to composing functions - <u>Khan Academy</u>
	8 5/2 – 5/6	<ul> <li>12.4 Solving Nonlinear Systems of Equations</li> <li>Topic 21 - Two-Way Tables</li> </ul>	Nonlinear equation graphs - Khan Academy

		Two way relative frequency tables - <u>Khan Academy</u>
9 F (0 F (1 2	Remediate/Review	
5/9 – 5/13 10	Assess     Standards Review	
5/16 – 5/20		
11 5/23 – 5/27	Standards Review	
12	Memorial Day Holiday – 5/30	
5/30 – 6/2	Standards Review	