## Grade 8 Pre-Algebra

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 sources 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:

IXL Math – Grade 8 Standards

Study Island

Login: 55s(student #)

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

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

FSA Portal

**PARCC** 

**Smarter Balanced Portal** 

	Week	Major Concepts / Topics	Possible Resources
	1	<ul> <li>Unit 0</li> <li>Prerequisite Skills -May include long division, operations with integers, solving linear equations.</li> <li>Unit 1 - Real Numbers, Exponents, and Scientific Notation</li> </ul>	Module 0 - Khan Academy
		Module 1 - Real Numbers - Lesson 1.1 Rational and Irrational Numbers	Lesson 1.1 - Khan Academy
	2	Unit 1 - Real Numbers, Exponents, and Scientific Notation  ■ Module 1 - Lesson 1.2 Sets of Real Numbers	Lesson 1.2 - Khan Academy
	2	Lesson 1.3 - Ordering Real Numbers	Lesson 1.3 - Khan Academy
		Unit 1 - Real Numbers, Exponents, and Scientific Notation	
	3	Module 1 -Lesson 1.3 - Ordering Real Numbers	
	3	Assessment	
		Module 2 - Exponents and Scientific Notation - Lesson 2.1 Integer Exponents	Lesson 2.1 - Khan Academy
	4	<ul> <li>Unit 1 - Real Numbers, Exponents, and Scientific Notation</li> <li>Module 2 - Lesson 2.1 - Integer Exponents</li> </ul>	
Quarter 1	4	Lesson 2.2 Scientific Notation with Positive Powers of 10	Lesson 2.2 - Khan Academy
Aug 10 – Oct 16		Unit 1 - Real Numbers, Exponents, and Scientific Notation	
	5	Module 2 - Lesson 2.3 - Scientific Notation with Negative Powers of 10	Lesson 2.3 - Khan Academy
		Lesson 2.4 - Operations with Scientific Notation	Lesson 2.4 - Khan Academy
	_	Unit 1 - Real Numbers, Exponents, and Scientific Notation	
	6	<ul> <li>Module 2 - Lesson 2.4 - Operations with Scientific Notation</li> <li>Assessment</li> </ul>	
		Unit 2 - Proportional and Nonproportional Relationships and Functions	
	7	Module 3 - Proportional Relationships - Lesson 3.1 - Representing Proportional Relationships	Lesson 3.1 - Khan Academy
		Lesson 3.3 - Interpreting the Unit Rate as Slope	Lesson 3.3 - <u>Khan Academy</u>
		Unit 2 - Proportional and Nonproportional Relationships and Functions	
	8	Module 3 - Lesson 3.2 - Rate of Change as Slope	Lesson 3.2 - Khan Academy
		Assessment     Unit 2 - Proportional and Nonproportional Relationships and Functions	
		Module 4 - Non-proportional Relationships - Lesson 4.1 - Representing Linear Non-Proportional	Lesson 4.1 - Khan Academy
	9	Relationships	
		Lesson 4.2 - Determining Slope and Y-Intercept	
			Lesson 4.2 - Khan Academy

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Unit 2 - Proportional and Nonproportional Relationships and Functions 10

- Module 4 Lesson 4.3 Graphing Linear Non-Proportional Relationships Using Slope and Y-Intercept
- **Quarter Assessment**

Lesson 4.3 - Khan Academy

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	Week	Major Concepts / Topics	Possible Resources
	1	<ul> <li>Unit 2 - Proportional and Nonproportional Relationships and Functions</li> <li>Module 4 - Non-Proportional Relationships - Lesson 4.4 - Proportional and Nonproportional Situations</li> <li>Assessment</li> </ul>	Lesson 4.4 - Khan Academy
	2	<ul> <li>Unit 2 - Proportional and Nonproportional Relationships and Functions</li> <li>Module 5 - Writing Linear Equations - Lesson 5.1 Writing Linear Equations from Situations and Graphs</li> <li>Lesson 5.2- Writing Linear Equations from a Table</li> </ul>	Lesson 5.1 - <u>Khan Academy</u> Lesson 5.2 - <u>Khan Academy</u>
	3	<ul> <li>Unit 2 - Proportional and Nonproportional Relationships and Functions</li> <li>Module 6 - Functions - Lesson 6.1 - Identifying and Representing Functions</li> <li>Lesson 6.2 - Describing Functions</li> </ul>	Lesson 6.1 - Khan Academy Lesson 6.2 - Khan Academy
Quarter 2	4	<ul> <li>Unit 2 - Proportional and Nonproportional Relationships and Functions</li> <li>Module 6 - Lesson 6.3 - Comparing Functions</li> <li>Lesson 6.4 - Analyzing Graphs</li> </ul>	Lesson 6.3 - Khan Academy Lesson 6.4 - Khan Academy
Oct 19 – Dec 18	5	<ul> <li>Unit 2 - Proportional and Nonproportional Relationships and Functions</li> <li>Assessment</li> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 7 - Solving Linear Equations - Lesson 7.1 - Equations with the Variable on Both Sides</li> </ul>	Lesson 7.1 - Khan Academy
	6	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 7 - Lesson 7.1 - Equations with the Variable on Both Sides</li> <li>Module 7 - Lesson 7.2 - Equations with Rational Numbers</li> </ul>	Lesson 7.2 - Khan Academy
	7	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 7 - Lesson 7.3 - Equations with Distributive Property</li> </ul>	Lesson 7.3 - Khan Academy
	8	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 7 - Lesson 7.4 - Equations with Many Solutions or No Solution</li> </ul>	Lesson 7.4 - Khan Academy
	9	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 8 - Solving Systems of Linear Equations - Lesson 8.1 - Solving Systems of Linear Equations by Graphing</li> <li>Semester Assessment</li> </ul>	Lesson 8.1 - <u>Khan Academy</u>

	Week	Major Concepts / Topics	Possible Resources
	1	<ul> <li>Unit 4 - Transformational Geometry</li> <li>Module 9 - Transformations and Congruence - Lesson 9.1 - Properties of Translations</li> <li>Lesson 9.2 - Properties of Reflections</li> </ul>	Lesson 9.1 - <u>Khan Academy</u> Lesson 9.2 - <u>Khan Academy</u>
	2	<ul> <li>Unit 4 - Transformational Geometry</li> <li>Module 9 - Lesson 9.3 - Properties of Rotations</li> <li>Lesson 9.4 - Algebraic Representations of Transformations</li> <li>Lesson 9.5 - congruent figures</li> <li>Assessment</li> </ul>	Lesson 9.3 - <u>Khan Academy</u> Lesson 9.4 - <u>Khan Academy</u> Lesson 9.5 - <u>Khan Academy</u>
	3	<ul> <li>Unit 4 - Transformational Geometry</li> <li>Module 10 - Transformations and Similarity - Lesson 10.1 - Properties of Dilations</li> <li>Lesson 10.2 - Algebraic Representations of Dilations</li> </ul>	Lesson 10.1 - Khan Academy Lesson 10.2 - Khan Academy
Quarter 3 Jan 5 – Mar 18	4	<ul> <li>Unit 4 - Transformational Geometry</li> <li>Module 10 - Lesson 10.3 - Similar Figures</li> <li>Module 11 - Lesson 11.3 - Angle Angle Similarity</li> <li>Assessment</li> </ul>	Lesson 10.3 - Khan Academy Lesson 11.3 - Khan Academy
Jan 3 Wai 13	5	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Module 11 - Angle Relationships in Parallel Lines and Triangles - Lesson 11.1 - Parallel Lines Cut by a Transversal</li> </ul>	Lesson 11.1 - Khan Academy
	6	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Module 11 - Lesson 11.2 - Angle Theorems for Triangles</li> <li>Assessment</li> </ul>	Lesson 11.2 - <u>Khan Academy</u>
	7	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Module 12 - The Pythagorean Theorem - Lesson 12.1 - The Pythagorean Theorem</li> </ul>	Lesson 12.1 - Khan Academy
	8	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Module 12 - Lesson 12.2 - The converse of the Pythagorean Theorem</li> <li>Module 12 - Lesson 12.3 - Distance Between Two Points</li> </ul>	Lesson 12.2 - <u>Khan Academy</u> Lesson 12.3 - <u>Khan Academy</u>
	9	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Assessment</li> <li>Module 13 - Volume - Lesson 13.1 - Volume of Cylinders</li> </ul>	Lesson 13.1 - <u>Khan Academy</u>

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10	<ul> <li>Unit 5 - Measurement Geometry</li> <li>Module 13 - Lesson 13.2 - Volume of Cones</li> <li>Lesson 13.3 - Volume of Spheres</li> </ul>	Lesson 13.2 - Khan Academy Lesson 13.3 - Khan Academy
11	Quarter Assessment	

	Week	Major Concepts / Topics	Possible Resources
	1	<ul> <li>Unit 6 - Statistics</li> <li>Module 14 - Scatter Plots - Lesson 14.1 - Scatter Plots and Association</li> <li>Lesson 14.2 - Trend Lines and Predictions</li> <li>Assessment</li> </ul>	Lesson 14-1 - <u>Khan Academy</u> Lesson 14-2 - <u>Khan Academy</u>
	2	<ul> <li>Unit 6 - Statistics</li> <li>Module 15 - Two-Way Tables - Lesson 15.1 - Two-Way Frequency Tables</li> <li>Lesson 15.2 - Two-Way Relative Frequency Tables</li> <li>Assessment</li> </ul>	Lesson 15-1 - <u>Khan Academy</u> Lesson 15-2 - <u>Khan Academy</u>
	3	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 8 - Solving Systems of Linear Equations - Lesson 8.2 - Solving Systems by Substitution</li> </ul>	Lesson 8-2 - <u>Khan Academy</u>
Quarter 4 Mar 29 – May 26	4	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 8 - Lesson 8.3 - Solving Systems by Eliminations</li> <li>Lesson 8.4 - Solving Systems by Elimination with Multiplication</li> </ul>	Lesson 8-3 - <u>Khan Academy</u> Lesson 8-4 - <u>Khan Academy</u>
	5	<ul> <li>Unit 3 - Solving Equations and Systems of Equations</li> <li>Module 8 - Lesson 8.5 - Solving Special Systems</li> </ul>	Lesson 8-5 - <u>Khan Academy</u>
	6	Performance Tasks	
	7	Algebra 1 Prerequisites - Rate of Change and Graphing a Line	Intro to Algebra - <u>Khan Academy</u>
	8	Algebra 1 Prerequisites - Solving a Systems by Graphing and distinguishing between graphs with one, zero, or infinite solutions.	
	9	<ul> <li>Algebra 1 Prerequisites - Exponents and Laws of Exponents</li> <li>Semester Assessment</li> </ul>	