

## Marietta City Schools Pacing Guide

**Subject: Math (Finley-Boggs)**

**Grade Level: Grade 7**

**Time Frame: Year Long**

Month / Week	CCS Benchmarks	Skills/Activities	Resources	Assessment
1st Quarter August	7.NS.1-REVIEW Math Essential Skills	*Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram	Go Math-Module 1 Khan Academy <a href="http://www.commoncoresheets.com">http://www.commoncoresheets.com</a> TPT Resources Videos Vocabulary Foldable-Interactive Notebook	<b>STAR TEST</b> Grade 6 Review Test (Textbook) Benchmark Test (Textbook) Formative Assessment Daily Homework Go Math Software Projects
September	7.NS.1 7.NS.2 7.NS.3	*Describe situations in which opposite quantities combine to make 0 *Understand $p + q$ as the number located a distance $ q $ from $p$ , in the positive or negative direction depending on whether $q$ is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real world contexts *Understand $p + q$ as the number located a distance $ q $ from $p$ , in the positive or negative direction depending on whether $q$ is positive or negative. *Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$ . Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts	Go Math Module 1 - <b>Adding and Subtracting Integers</b> Go Math Module 2 - <b>Multiplying and Dividing Integers</b> Understanding Integers Exponents-CCS8-Enrichment Khan Academy <a href="http://www.commoncoresheets.co">http://www.commoncoresheets.co</a> TPT Resources Videos Vocabulary Foldable-Interactive Notebook Number Lines	Formative Assessment Daily Homework Go Math Software Projects

October		<p>*Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts</p> <p>*Apply properties of operations as strategies to add and subtract rational numbers</p> <p>*Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers</p> <p>Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real world contexts</p> <p>*Apply properties of operations as strategies to multiply and divide rational numbers</p> <p>*Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats</p> <p>* Solve real-world and mathematical problems involving the four operations with rational numbers</p>	<p>Go Math Module 3  <b>- Rational Numbers</b>  Khan Academy  <a href="http://www.commoncoresheets.com/">http://www.commoncoresheets.com/</a>  TPT Resources  Videos  Vocabulary  Foldable--Interactive Notebook  Seeing Fractions Among Ourselves-<b>AIMS</b></p>	<p><b>STAR TEST</b>  Formative Assessment  Daily Homework  Go Math Software  Projects</p>
2nd Quarter November	7.RP.1 7.RP.2 7.RP.3	<p>*Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units</p> <p>*Recognize and represent proportional relationships between quantities</p> <p>*Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin; *Identify the constant of</p>	<p>Go Math Module 4  <b>- Ratios and Proportionality</b>  Go Math Module 5  <b>- Proportions and Percent</b>  Khan Academy  <a href="http://www.commoncoresheets.co">http://www.commoncoresheets.co</a>  TPT Resources  Vocabulary  Foldables--Interactive Notebook  Amplify fractions website (new)</p>	<p>Formative Assessment  Daily Homework  Go Math Software  <b>Project-Ratio/Percent-</b>  "Over the river and through the woods..."</p>

	7.EE.3	<p>proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships</p> <p>*Represent proportional relationships by equations</p> <p>*Explain what a point <math>(x, y)</math> on the graph of a proportional relationship means in terms of the situation, with special attention to the points <math>(0, 0)</math> and <math>(1, r)</math> where <math>r</math> is the unit rate</p> <p>*Use proportional relationships to solve multistep ratio and percent problems</p> <p>*Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies</p> <p>*Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related</p>		
	7.EE.2			
December	7.EE.1 7.EE.4	<p>*Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients</p> <p>*Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities</p> <p>*Solve word problems leading to equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach</p>	<p>Go Math Module 6 - <b>Expressions and Equations</b> Go Math Module 7 - <b>Inequalities</b> Khan Academy <a href="http://www.commoncoresheets.com/">http://www.commoncoresheets.com/</a> TPT Resources Vocabulary Foldable-Interactive Notebook Hands on Algebra</p>	<p><b>STAR TEST</b> Benchmark Test-Part 1 --- Check for Growth Formative Assessment Daily Homework Go Math Software Project</p>

		*Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.		
January 3rd Quarter 2nd Semester	7.G.1 7.G.2 7.G.3 7.G.4 7.G.5 7.G.6	<p>*Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale</p> <p>*Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle</p> <p>*Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids</p> <p>*Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle</p> <p>*Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure</p> <p>*Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>	<p>Go Math Module 8 - <b>Modeling Geometric Figures</b> Go Math Module 9 - <b>Circumference, Area, and Volume</b> Khan Academy <a href="http://www.commoncoresheets.com/">http://www.commoncoresheets.com/</a> TPT Resources <a href="http://www.math-aids.com/Geometry/Volume/">http://www.math-aids.com/Geometry/Volume/</a> Vocabulary Foldable-Interactive Notebook</p>	<p>Benchmark Test-Part 2 Formative Assessment Daily Homework Go Math Software Project</p>
February	7.SP.5 7.SP.6 7.SP.7 7.SP.8	<p>*Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around <math>1/2</math> indicates an event that is neither unlikely nor likely,</p>	<p>Go Math Module 12 - <b>Experimental Probability</b> Go Math Module 13 - <b>Theoretical Probability and Simulations</b> Khan Academy</p>	<p>Vocabulary Knowledge Formative Assessment Daily Homework Go Math Software Project</p>

		<p>and a probability near 1 indicates a likely event;</p> <p>*Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability;</p> <p>*Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy;</p> <p>*Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events</p> <p>*Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process;</p> <p>*Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation;</p> <p>*Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs;</p> <p>*Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”), identify the outcomes in the sample space which compose the event;</p> <p>*Design and use a simulation to generate frequencies for compound events</p>	<p><a href="http://www.commoncoresheets.com">http://www.commoncoresheets.com</a></p> <p>TPT Resources</p> <p>Vocabulary</p> <p>Foldable-Interactive Notebook</p>	
March	<p>7.SP.1</p> <p>7.SP.2</p> <p>7.SP.3</p> <p>7.SP.4</p>	<p>*Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population.</p>	<p>Go Math Module 10</p> <p><b>-Random Samples and Populations</b></p> <p>Go Math Module 11</p> <p><b>- Analyzing and Comparing Data</b></p>	<p>Vocabulary Knowledge</p> <p>Formative Assessment</p> <p>Daily Homework</p> <p>Go Math Software</p> <p>Project</p>

		<p>Understand that random sampling tends to produce representative samples and support valid inferences;</p> <p>*Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions;</p> <p>*Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability;</p> <p>*Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations</p> <p>Design a project addressing all graphs using one set of data collected by (graphs to address-histogram, circle graph, dot plot, box plot)</p> <p>Vocabulary addressed will include <i>mean, median, mode, range, outlier, spread, shape and mean absolute deviation</i>*-this concept will leave 7th grade curriculum after 2017-2018 school year.</p>	<p>Khan Academy  <a href="http://www.commoncoresheets.com">http://www.commoncoresheets.com</a>  TPT Resources  Vocabulary  Foldable-Interactive Notebook</p>	
4th Quarter April	Review concepts AIR testing	<p>Critical Areas of Focus related to AIR Test</p> <p>Introduction of Interactive Notebook as a form of Review-notebooks home for review weekend prior to testing for added personal touch and student review.</p>	<p>Khan Academy  <a href="http://www.commoncoresheets.com">http://www.commoncoresheets.com</a>  /  TPT Resources  Vocabulary  Foldable-Interactive Notebook</p>	<p><b>STAR TEST</b>  Benchmark Test, Part 2  Formative Assessment  Daily Homework  Go Math Software  Florida Standards Assessments  - Practice Test</p>

May	Summarize 7th Grade Concepts	<p>After testing:</p> <ul style="list-style-type: none"> <li>*Review of Rational Numbers</li> <li>* Introduction and Extension of Exponents,</li> <li>*Scientific Notation, Square Roots</li> <li>*Equations(one, two, and multi-step)</li> <li>*Multiplication Facts</li> <li>*<b>End of Year Choice Project</b>-addresses careers, construction of a game, connections to other disciplines, technology, research paper on selected mathematician</li> <li>*Use of Google in the Classroom</li> </ul>	<p>Khan Academy  <a href="http://www.commoncoresheets.com">http://www.commoncoresheets.com</a>  /</p> <p>TPT Resources  Vocabulary  Foldable-Interactive Notebook  Copy of all worksheets in notebook  Labeled after testing</p>	<ul style="list-style-type: none"> <li>*AIR TEST</li> <li>*Formative Daily Assessment</li> <li>Class Participation</li> <li>Go Math Software Project</li> <li>Pre-Algebra 7 Summer Review WS</li> </ul>
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