



## Middle School Content Strands – Benchmark Scope and Sequence

	Integrated Math I (Gr. 6)	Integrated Math II	Integrated Math III	MS Math I
<b>Number and Operations</b>				
Number System	<ul style="list-style-type: none"> <li>Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</li> <li>Compute fluently with multi-digit numbers and find common factors and multiples.</li> <li>Apply and extend previous understandings of numbers to the system of rational numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Know that there are numbers that are not rational, and approximate them by rational numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Reason quantitatively and use units to solve problems</li> </ul>
<b>Algebra</b>				
Ratios and Rational Properties	<ul style="list-style-type: none"> <li>Understand ratio concepts and use ratio reasoning to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>Analyze proportional relationships and use them to solve real-world and mathematical problems.</li> </ul>		
Expressions and Equations	<ul style="list-style-type: none"> <li>Apply and extend previous understandings of arithmetic to algebraic expressions.</li> <li>Reason about and solve one-variable equations and inequalities.</li> <li>Represent and analyze quantitative relationships between dependent and independent variables.</li> </ul>	<ul style="list-style-type: none"> <li>Use properties of operations to generate equivalent expressions.</li> <li>Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</li> </ul>	<ul style="list-style-type: none"> <li>Work with radicals and integer exponents.</li> <li>Understand the connections between proportional relationships, lines, and linear equations.</li> <li>Analyze and solve linear equations and pairs of simultaneous linear equations.</li> </ul>	<p><b>Seeing Structure in Expressions</b></p> <ul style="list-style-type: none"> <li>Interpret the structure of expressions</li> <li>Write expressions in equivalent forms to solve problems</li> </ul> <p><b>Creating Equations</b></p> <ul style="list-style-type: none"> <li>Create equations that describe numbers or relationships</li> </ul> <p><b>Reasoning with Equations and Inequalities</b></p> <ul style="list-style-type: none"> <li>Solve equations and inequalities in one variable</li> <li>Solve systems of equations</li> <li>Represent and solve equations and inequalities graphically</li> </ul>



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Functions			<ul style="list-style-type: none"> <li>Define, evaluate, and compare functions.</li> <li>Use functions to model relationships between quantities.</li> </ul>	<p><b>Interpreting Functions (F-IF)</b></p> <ul style="list-style-type: none"> <li>Understand the concept of a function and use function notation</li> <li>Interpret functions that arise in applications in terms of the context</li> <li>Analyze functions using different representations</li> </ul> <p><b>Building Functions</b></p> <ul style="list-style-type: none"> <li>Build a function that models a relationship between two quantities</li> </ul> <p><b>Linear, Quadratic, and Exponential Models</b></p> <ul style="list-style-type: none"> <li>Construct and compare linear, quadratic, and exponential models and solve problems</li> <li>Interpret expressions for functions in terms of the situation they model</li> </ul>
<b>3. Measurement and Data Analysis</b>				
Statistics and Probability	<ul style="list-style-type: none"> <li>Develop understanding of statistical variability.</li> <li>Summarize and describe distributions.</li> </ul>	<ul style="list-style-type: none"> <li>Use random sampling to draw inferences about a population.</li> <li>Draw informal comparative inferences about two populations.</li> <li>Investigate chance processes and develop, use, and evaluate probability models.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate patterns of association in bivariate data.</li> </ul>	<p><b>Interpreting categorical and quantitative data</b></p> <ul style="list-style-type: none"> <li>Summarize, represent, and interpret data on a single count or measurement variable</li> <li>Summarize, represent, and interpret data on two categorical and quantitative variables</li> <li>Interpret linear models</li> </ul>
<b>Geometry</b>				
Geometry	<ul style="list-style-type: none"> <li>Solve real-world and mathematical problems involving area, surface area, and volume.</li> </ul>	<ul style="list-style-type: none"> <li>Draw, construct and describe geometrical figures and describe the relationships between them.</li> <li>Solve real-life and mathematical problems involving angle</li> </ul>	<ul style="list-style-type: none"> <li>Understand congruence and similarity using physical models, transparencies, or geometry software.</li> <li>Understand and apply the</li> </ul>	<p><b>Congruence</b></p> <ul style="list-style-type: none"> <li>Experiment with transformation in the plane</li> <li>Understand congruence in terms of rigid motions</li> </ul>



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	Integrated Math I (Gr. 6)	Integrated Math II	Integrated Math III	MS Math I
		measure, area, surface area and volume.	Pythagorean Theorem. ▪ Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.	▪ Prove geometric theorems

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