

# 8<sup>th</sup> Grade Math Syllabus

CMP Units Covered	Math Concepts
<b>Looking for Pythagoras (second half) (The Pythagorean Theorem)</b>	<ul style="list-style-type: none"> <li>• Characteristics of polygons</li> <li>• Area</li> <li>• Introduction to radical expressions</li> <li>• Distance between points</li> <li>• Pythagorean Theorem</li> <li>• Pythagorean Triples</li> <li>• Special Right Triangles</li> <li>• Irrational numbers</li> </ul>
<b>Say it with Symbols (Making sense of expressions and symbols)</b>	<ul style="list-style-type: none"> <li>• Functions</li> <li>• Distributive property</li> <li>• Multiplying binomials</li> <li>• Volume: Cone, Cylinder, Prism, Sphere</li> </ul>
<b>Shapes of Algebra (Linear systems and inequalities)</b>	<ul style="list-style-type: none"> <li>• Parallel and Perpendicular lines</li> <li>• Midpoint</li> <li>• Standard form of linear equations</li> <li>• X and y intercepts</li> <li>• Graphing systems of linear equations</li> <li>• Solving systems using substitution and/or elimination</li> <li>• Graphing linear inequalities and systems of linear inequalities</li> </ul>
<b>Frogs, Fleas, and Painted Cubes (Quadratic Relationships)</b>	<ul style="list-style-type: none"> <li>• Introduction to quadratic equations</li> <li>• Graphing parabolas</li> <li>• Factoring quadratics</li> <li>• Solving quadratic equations</li> </ul>
<b>Growing, Growing, Growing (Exponential Relationships)</b>	<ul style="list-style-type: none"> <li>• Introduction to exponential growth</li> <li>• Scientific notation</li> <li>• Growth factor</li> <li>• Identifying exponential patterns in word problems, tables, and graphs</li> <li>• Operations with exponents</li> </ul>
<b>Chapter 6,7 in CME (Exponents and Radicals, Polynomials)</b>	<ul style="list-style-type: none"> <li>• Understanding scientific notation and exponents</li> <li>• Rules and operations involving exponents and radicals</li> <li>• Graphing exponential functions</li> <li>• Creating complex ratios</li> <li>• Creating equivalent expressions</li> <li>• Understanding polynomials and how to factor</li> </ul>
<b>Chapter 8 in CME (Quadratics)</b>	<ul style="list-style-type: none"> <li>• Discovering the quadratic formula</li> <li>• Creating quadratic graphs</li> <li>• Reading quadratic graphs</li> <li>• Using quadratics in real-world situations</li> </ul>
<b>Kaleidoscopes, Hubcaps, and Mirrors (Symmetry and transformations in geometry)</b>	<ul style="list-style-type: none"> <li>• Symmetry and Transformation</li> <li>• Congruent triangles</li> <li>• Dilation</li> <li>• Rotation</li> </ul>