

## Grade 7 Mathematics Course Comparison

	Mathematics 7	Mathematics 7 Honors	Algebra 1 Honors
Content	<p>This course emphasizes the foundation of algebra. Areas of study include the following six strands:</p> <ul style="list-style-type: none"> <li>• Number and Number Sense</li> <li>• Computation and Estimation</li> <li>• Geometry</li> <li>• Measurement</li> <li>• Probability and Statistics</li> <li>• Patterns, Functions, and Algebra</li> </ul>	<p>This course is based on <b>Prealgebra</b> curriculum and includes extensions and enrichment. Emphasis is placed on mathematical reasoning, non-routine problem solving, and algebraic connections among mathematical ideas.</p>	<p>This course provides opportunity for students to use algebra as a tool for representing and solving a variety of practical problems. Tables and graphs will be used to interpret algebraic expressions, equations, and inequalities and to analyze functions.</p>
Course Highlights	<p>Topics include:</p> <ul style="list-style-type: none"> <li>• Proportional reasoning</li> <li>• Integer operations</li> <li>• Relationships between figures</li> <li>• Applications of statistics and probability</li> <li>• Solving two-step linear equations and inequalities</li> <li>• Problem solving through real-life applications</li> </ul>	<p>Topics include:</p> <ul style="list-style-type: none"> <li>• Relationships within the Real Number System</li> <li>• Practical applications of operations with Real Numbers</li> <li>• Problem solving</li> <li>• Statistical analysis of graphs</li> <li>• Linear relationships – solving and graphing equations</li> </ul> <p>Some extension topics include:</p> <ul style="list-style-type: none"> <li>• Venn diagrams, laws of exponents, permutations and combinations, and finding the line of best fit for a set of data</li> </ul>	<p>Topics include:</p> <ul style="list-style-type: none"> <li>• Polynomial operations</li> <li>• Laws of exponents</li> <li>• Factor binomials and trinomials</li> <li>• Solve multistep linear and quadratic equations</li> <li>• Solve multistep linear inequalities</li> <li>• Graph linear equations and inequalities</li> <li>• Investigate and analyze linear and quadratic families</li> <li>• Interpret variation in data set in real-world context</li> <li>• Determine the equation of the curve of best fit for a set of data</li> </ul> <p>Some extension topics include:</p> <ul style="list-style-type: none"> <li>• Fractional exponents, simplify rational expressions, derive the quadratic formula, solve radical equations, and solve absolute value inequalities, 3 variable systems of equations</li> </ul>
Comments	Pre-Algebra Course	<p>If a student did not take Compacted Mathematics 6 they are essentially skipping a year of mathematics and missing important mathematics concepts such as:</p> <ul style="list-style-type: none"> <li>• Integer operations</li> <li>• Solving algebraic equations</li> </ul>	<p>The following criteria needs to be met for placement in Algebra I Honors:</p> <ul style="list-style-type: none"> <li>• Advanced Mathematics 6 or a year-long accelerated mathematics course</li> <li>• IAAT Score at or above the 91<sup>st</sup> percentile</li> <li>• A score of pass advanced (500 or above) on the Mathematics 7 SOL test</li> </ul>
High School Credit	N/A	N/A	<p>Students earn high school credit</p> <ul style="list-style-type: none"> <li>• additional grade point weight of + 0.5</li> <li>• grade may be expunged</li> <li>• a student's first high school mathematics course may not be taken over the summer</li> </ul>
SOL Test	The student will take the <b>Mathematics 7</b> SOL test in the Spring	The student will take the <b>Mathematics 8</b> SOL test in the Spring	<p>The student will take the <b>Algebra 1</b> SOL test in the Spring</p> <ul style="list-style-type: none"> <li>• A score of pass proficient or passed advanced combined with successful completion of the course will earn a student one verified credit toward graduation</li> </ul>
8 <sup>th</sup> grade Course	<p>Choice of one of the following:</p> <ul style="list-style-type: none"> <li>• Pre-Algebra</li> <li>• Algebra I (open enrollment)</li> <li>• Algebra I Honors (open enrollment)</li> </ul>	<p>Choice of one of the following:</p> <ul style="list-style-type: none"> <li>• Algebra I (open enrollment)</li> <li>• Algebra I Honors (open enrollment)</li> </ul>	Geometry Honors – (Pre-requisite: Algebra 1)