

# BRMS 7<sup>th</sup> Grade Math

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## Course Description:

Math 2: The work in math in 7<sup>th</sup> grade is focused around 5 domains, which are weaved together to build the students' ability in procedural fluency, conceptualization, and their ability to transfer and apply their knowledge. The areas of content focus are around Ratio and Proportional Reasoning, Number Systems, Expressions and Equations, Geometry, and Statistics and Probability. Some of these domains have a major focus, some are supporting, and some are additional.

## 7<sup>th</sup> Grade Math Standards Focus

Major	Supporting	Additional
<b>Ratios and Proportional Relationships</b> -Analyze proportional relationships and use them to solve real-world and mathematical problems.  <b>The Number System</b> -Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.  <b>Expressions and Equations</b> -Use properties of operations to generate equivalent expressions. -Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	<b>Statistics and Probability</b> -Use random sampling to draw inferences about a population. -Investigate chance processes and develop, use, and evaluate probability models.	<b>Statistics and Probability</b> -Draw informal comparative inferences about two populations.  <b>Geometry</b> -Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. -Draw, construct and describe geometrical figures and describe the relationships between them.

Along with the content standards, a huge focus is on the Standards of Mathematical Practice. We feel that if a student can show success in these standards, it will translate to success in the mathematical content as well.

1. Make sense of problems and *persevere* in solving them.
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reason of others.
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning.

**Math 2.5:** This class is for those students who are on an accelerated path in math. These students completed all of the 6<sup>th</sup> grade content and half of the 7<sup>th</sup> grade content during sixth grade. This class is designed to cover the entire 8<sup>th</sup> grade course while filling in the remainder of the 7<sup>th</sup> grade content. The goal is for all students in this class to be prepared to take Algebra I in 8<sup>th</sup> grade.

### 8<sup>th</sup> Grade Math Standards Focus

Major	Supporting	Additional
<p><b>Expressions and Equations</b> Work with radicals and integer exponents. Understand the connections between proportional relationships, lines, and linear equations. Analyze and solve linear equations and pairs of simultaneous linear equations.</p> <p><b>Functions</b> Define, evaluate, and compare functions.</p> <p><b>Geometry</b> Understand and apply the Pythagorean Theorem. Understand congruence and similarity using physical models, transparencies, or geometry software.</p>	<p><b>The Number System</b> Know that there are numbers that are not rational, and approximate them by rational numbers. 10</p> <p><b>Functions</b> Use functions to model relationships between quantities. 11</p> <p><b>Statistics and Probability</b> Investigate patterns of association in bivariate data. 12</p>	<p><b>Geometry</b> o Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.</p>

### *Standards Based Grading*

Student scores will be focused on how well the students are doing in meeting the standards for their course. The scores that are reported indicate their level of mastery of those standards. The scores are:

- 4: Exceeding expectations
- 3: Meeting expectations
- 2: Progressing toward expectations
- 1: Insufficient progress toward expectations
- IE: Insufficient evidence