



Math 7 (Regular)

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Overview: Grade 7 mathematics builds on students' foundational skills and prepares them for the abstract reasoning required in algebra and beyond. Students deepen their understanding of proportional relationships, operations with rational numbers, and expressions, equations, and inequalities. They apply mathematics to solve real-life and mathematical problems involving percents, interest, discounts, scale drawings, and probability.

In geometry, students analyze two- and three-dimensional figures using scale, transformations, and angle relationships. They also continue developing statistical reasoning through the collection, analysis, and interpretation of data. Grade 7 students are encouraged to persevere in problem solving, justify their reasoning, and make connections across domains. Their study of mathematics is grounded in Catholic values such as truth, order, and the responsible use of knowledge to serve others.

The clusters below are benchmarked against the Maryland College & Career Ready Standards & Frameworks. Clusters marked (*) below are the most critical areas for this course, which are the foundational content domains students must master to ensure readiness for the next grade.

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.*

The Number System

- Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.*

Expressions and Equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.*

Geometry

- Draw, construct, and describe geometrical figures and describe the relationships between them.
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.*

Statistics and Probability

- Use random sampling to draw inferences about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.

Mathematical Practices: The nine mathematical practices, below, describe what mathematicians do. However, they also describe important skills outside the math classroom, both in other subject areas and the real world. Students at all levels will develop these skills gradually throughout their time in Archdiocesan schools in grade-appropriate ways. This work should be nearly done every day and for nearly every topic.

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.
- Practice mathematics with a Catholic conscience.