

GRADE 7 MATH

Course Frequency: Full-year course, five times per week

Credits Offered: None

Prerequisites: None

Mathematics at RJ Grey JHS is aligned with the [Massachusetts Mathematics Framework 2017](#) and seeks to develop deep mathematical proficiency for all students in **five interrelated strands**:

- **Conceptual Understanding** – The comprehension and connection of concepts, operations, and relations that establish the foundation of and are necessary for developing procedural fluency.
- **Procedural Fluency** – To use math effectively, students must be able to do much more than carry out mathematical procedures. They must know which procedure is appropriate and most productive in a given situation, what a procedure accomplishes, and what kind of results to expect.
- **Problem Solving** – The ability to formulate, represent, and solve mathematical problems.
- **Justify Reasoning** – The capacity to think logically and to justify one’s thinking and critique the reasoning of others.
- **Productive Disposition** – We want students to understand that math is useful, interesting, and worthwhile, and that they can become really good at it if they persevere and apply effective effort.

The **7th Grade Math** curriculum is the same for all students and utilizes the Desmos Middle School Mathematics curriculum, which is an adaptation of the Illustrative Mathematics program utilized in grades K-6. The focus in grade 7 is to solidify core basic math skills in decimals, fractions, and percents and to develop a strong foundation in integers, geometry, proportional reasoning, and solving equations and inequalities.

Course-End Learning Objectives

Ratios and Proportional Relationships

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

The Number System

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

Expressions and Equations

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

Geometry

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

Statistics and Probability

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