

MIDDLE SCHOOL MATH

MATH

Kindergarten through grade twelve math instruction emphasizes practices and activities that promote and integrate the eight Standards for Mathematical Practice and the Washington State Learning Standards.

Mathematical Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning 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.

Sixth Grade instructional time should focus on these critical learning standards:

1. Use ratios and ratio reasoning to solve real world problems.
2. Accurately add, subtract, multiply, and divide decimals and fractions.
3. Solve one variable equations and inequalities.
4. Extend understanding of arithmetic to solve algebraic equations.
5. Apply and extend understanding of numbers to include the system of rational numbers including multiplying and dividing fractions.
6. Solve real-world and mathematical problems by graphing points and using to find distances between the points.

Seventh Grade instructional time should focus on these critical learning standards:

1. Develop an understanding of and applying proportional relationships (rates, ratios, and percentages).
2. Add, subtract, multiply, and divide rational numbers (positive and negative whole numbers, decimals, and fractions).
3. Solve problems involving numerical and algebraic expressions and equations.
4. Draw inferences about populations based on population samples.
5. Solve real world mathematical problems involving percentages.

Foundations of Algebra instructional time should focus on these critical learning standards:

1. Formulate reasoning about expressions and equations, including linear equations with one variable and systems of linear equations to determine a solution from a real-world situation.
2. Explain the connections between and apply understanding of proportional relationships, lines, and linear equations.
3. Define, evaluate, and compare functions.
4. Use functions to model relationships between quantities.
5. Understand and apply the Pythagorean Theorem. $a^2 + b^2 = c^2$
6. Understand congruence and similarity to describe, analyze, and solve problems for two-dimensional figures including translations, rotations, reflections, and dilations.

Algebra 1 instructional time should focus on these critical learning areas:

1. Solve and graph linear equations.
2. Factor and solve quadratic equations.
3. Graph parabolas.