

Math 1 Curriculum

The fundamental purpose of the **Mathematics 1** course is to formalize and extend the mathematics that students learned in Common Core 6, 7 and 8 grade. Math 1 includes standards from the conceptual categories of **(1) Number System, (2) Algebra, (3) Functions, (4) Geometry, and (5) Statistics and Probability**. The instructional time will focus on these critical areas. The Math Practice will complement these critical content standards so that students engage with the subject matter as they grow in mathematical mastery during their middle and high school years.

1. Number System

Quantities

- Reason quantitatively and use units to solve problems.
- Use properties of rational and irrational numbers.

2. Algebra

Seeing Structure in Expressions

- Interpret the structure of expressions.
- Write expressions in equivalent forms to solve problems.

Creating Equations

- Create equations that describe numbers or relationships.

Reasoning with Equations and Inequalities

- Understand solving equations as a process of reasoning and explain the reasoning.
- Solve equations and inequalities in one variable.
- Solve systems of equations.
- Represent and solve equations and inequalities graphically.

3. Functions

Interpreting Functions

- Understand the concept of a function and use function notation.
- Interpret functions that arise in applications in terms of the context.
- Analyze functions using different representations.

Building Functions

- Build a function that models a relationship between two quantities.
- Build new functions from existing functions.

Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems.
- Interpret expressions for functions in terms of the situation they model.

4. Geometry

Congruence

- Experiment with transformations in the plane.
- Understand congruence in terms of rigid motions.
- Make geometric constructions.

Expressing Geometric Properties with Equations

- Use coordinates to prove simple geometric theorems algebraically.

5. Statistics and Probability

Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable.
- Summarize, represent, and interpret data on two categorical and quantitative variables.
- Interpret linear models.