

Math Course Descriptions

Grade 6 Mathematics:

Focuses on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Grade 6 Mathematics Advanced:

Focuses on six critical areas. The first 4 areas are the same as Grade 6 Mathematics. The remaining two areas are: (1) developing understanding of and applying proportional relationships; and (2) developing understanding of operations with rational numbers and working with expressions and linear equations.

Grade 7 Mathematics:

Focuses on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area and volume; and (4) drawing inferences about population based samples.

Grade 7 Mathematics Advanced:

Focuses on five critical areas. The first 2 areas are the same as Grade 7 (1 and 2), the remaining 3 are: (1) formulating and reasoning about expressions and equations, including modeling and association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Grade 8 Mathematics:

Focuses on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Honors Algebra (H.S. Credit)

Focuses on five critical areas: They are designed to deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving and using the quadratic function. (1) relationships between quantities and reasoning with equations; (2) linear and exponential relationships; (3) descriptive statistics; (4) expressions and equations; and (5) Quadratic functions and modeling.

Honors Geometry (H.S. Credit)

There are five critical areas: (1) congruence, proof and constructions; (2) similarity, proof and trigonometry; (3) Extending to three dimensions; (4) connecting algebra and geometry through coordinates; (5) circles with and without coordinates.