

A+ COMPETENCIES

NAME MATHEMATICS

ALGEBRA I

MASTERY AT 70% OR HIGHER

Understand relationships between numbers and their properties and perform operations fluently.

Understand, represent, and analyze patterns, relations, and functions.

Demonstrate and apply various formulas in problem-solving situations.

Represent, analyze and make inferences based on data with and without the use of technology.

The student will analyze a wide variety of patterns and functional relationships using the language of mathematics and appropriate technology.

The student will model and interpret real-world situations using the language of mathematics and appropriate technology.

Through the study of algebra, a student develops an understanding of the symbolic language of mathematics and the sciences.

Algebraic skills and concepts are developed and used in a wide variety of problem-solving situations.

ALGEBRA II

MASTERY AT 70% OR HIGHER

Understand relationships among numbers and compute fluently. Verify with technology.

Use algebraic concepts to identify patterns, use multiple representations of relations and functions, and apply operations to expressions, equations, and inequalities.

Understand measurable attributes of objects and apply appropriate techniques and formulas to determine measurements.

Use technology to represent, analyze, and make inferences based on data.

Students who master algebra II will gain experience with algebraic solutions of problems in various content areas, including the solution of systems of quadratic equations, logarithmic and exponential functions, the binomial theorem, and the complex number system.

GEOMETRY

MASTERY AT 70% OR HIGHER

The learner will perform operations with real numbers to solve problems.

The learner will use geometric and algebraic properties of figures to solve problems and write proofs.

The learner will transform geometric figures in the coordinate plane algebraically.

The learner will perform operations with complex numbers, matrices, and polynomials.

Students will develop their ability to construct formal, logical arguments and proofs in geometric settings and problems.

TRIG/MATH ANALYSIS

MASTERY AT 70% OR HIGHER

The learner will describe geometric figures in the coordinate plane algebraically.

The learner will use relations and functions to solve problems.

The learner will operate with complex numbers and vectors to solve problems.

The learner will analyze data to solve problems.

The student has a conceptual understanding of problems and mathematical reasoning in solving problems.

Students are adept at the arithmetic of complex numbers. They can use the trigonometric form of complex numbers and understand that a function of a complex variable can be viewed as a function of two real variables.

Students are familiar with complex numbers.

Students demonstrate an understanding of complex formulas.

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