Mathematics Criteria for Graduating Seniors:

# Mathematical Mindsets

Demonstrate confidence in your ability to learn mathematics.

Demonstrate an appreciation for the importance of mathematics in our society.

Demonstrate comprehension of how math will influence you personally in your own life.

# Basic Numerical Skills and Applications

Demonstrate **fluency, comprehension,** and applications of basic operations (+, -, ×, ÷) with whole numbers.

Demonstrate **fluency, comprehension,** and applications of basic operations (+, -, ×, ÷) with integers.

Demonstrate **fluency, comprehension,** and applications of basic operations (+, -, ×, ÷) with fractions.

Demonstrate **fluency, comprehension,** and applications of basic operations (+, -, ×, ÷) with percentages and decimals.

Demonstrate **fluency and comprehension** of exponents and square roots.

Demonstrate fluency, comprehension, and applications of **ratios and proportions**.

Demonstrate an **ability to estimate and round calculations** to approximate solutions.

Demonstrate fluency and comprehension **of simple financial literacy**.

# Statistics and Probability

Demonstrate fluency in interpreting and creating graphs, tables, and charts.

Demonstrate fluency, comprehension, and applications of **simple probabilities**.

Demonstrate fluency, comprehension, and applications of **simple statistics** (averages, deviations, and other statistics).

Demonstrate an **ability to judge the truth** of research studies by analyzing biases, assumptions, and generalizations.

# Geometry

Demonstrate **fluency, comprehension,** and applications in measuring angles, lengths, widths, and volumes.

Demonstrate **fluency, comprehension**, and applications of perimeters and areas.

Demonstrate **fluency, comprehension**, and applications of surface area and volume.

Demonstrate fluency, comprehension, and applications of **similarity and proportions** in geometric modeling.

Demonstrate fluency and comprehension of **properties of triangles**.

# Algebra

Demonstrate fluency and comprehension of **the connection** between graphs, equations, and tables.

Demonstrate **comprehension** of multiple number systems.

Demonstrate fluency, comprehension, and applications of **the language of algebra**.

Demonstrate fluency, comprehension, and applications of **linear equations**.

Demonstrate fluency, comprehension, and applications of **exponential equations**.

Demonstrate fluency and comprehension of **intermediate financial literacy** (including profit and investing).

Demonstrate fluency and comprehension of functions.

# Modeling

Create and apply numeric models to real-life situations.

Create and apply linear models to real-life situations.

Create and apply exponential models to real-life situations.

Create and apply geometric concepts to model real-life situations.

# \*College Prepared\*

## Advanced Algebra

Demonstrate **fluency, comprehension**, and applications of quadratic equations.

Demonstrate fluency and comprehension of **critical features** of functions.

Demonstrate an ability to **explore and interpret** different types of functions.

## Geometry

Demonstrate **fluency and comprehension** of mathematical proofs and deductive reasoning.

Demonstrate fluency and comprehension of **abstract geometry**.

Demonstrate fluency, comprehension, and applications of **trigonometry**.

## Modeling

Demonstrate an ability to recognize patterns and select appropriate mathematical models for the situation.