

High Bluff Academy
Integrated Math 3

Course Description

Integrated Math 2 is the second course of a three year college preparatory integrated math sequence. This course is a college prep course that meets the minimum graduation requirement for the state of California, and follows the Integrated Math Pathway in the Common Core State Standards. In Math 3, students pull together and apply the accumulation of learning that they have from their previous courses, with content grouped into four critical areas. Students apply methods from probability and statistics to draw inferences and conclusions from data. They expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to include all triangles. Finally, students bring together all of their expertise with functions and geometry to create models and solve contextual problems. Students will be expected to work collaboratively, individually and demonstrate their learning through the Standards of Mathematical Practice. Students will be exposed to rich instruction that develop their conceptual understanding, procedural skill, problem solving skills, critical thinking abilities, and strengthen situational analysis abilities.

At the conclusion of this course, students will be proficient in the following topics:

- Using statistical methods to analyze and draw conclusions from data
- Linear equations, Inequalities, and functions
- Quadratic functions and equations
- Polynomials and polynomial functions
- Rational expressions and functions
- Radical expressions and functions
- Exponential and logarithmic functions
- Trigonometric functions and the unit circle
- Sequences and series
- Applications of geometric concepts
- Making connections between algebra and geometry using perimeter, area, and coordinate geometry
- Circles

This course is the 3rd year of a 3 year integrated mathematics series. These three courses incorporate a strategic interweaving of mathematics with authentic connections among theory and application, algorithm, and mathematical practices, designed to naturally scaffold the learning of a constantly deepening material. As a consequence, students increase understanding and recognize that all math is interrelated, purposeful and applicable. The Mathematical Practice Standards apply throughout the course and together with the content standards provide students with a math experience that is coherent, useful, and logical. Students make use of their sense making in problem situations. The integrated math course prepares students for higher-level math courses such as Math Analysis and Statistics.