

HONORS NC MATH II COURSE INFORMATION

Teacher: Mrs. Cheek, Room 2202 (Annex)
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Course Goals and Content: Honors NC Math II is the second course in a sequence that includes strands of algebra, statistics, probability and geometry, which model real-world situations. Students will practice making connections between tables, graphs and equations for functions. Using appropriate technology, manipulatives and graphing calculators, students will apply concepts, communicate, reason, create models and make connections in the following areas: Number Operations, Algebraic Relationships, Geometric Relationships, Data Analysis and Probability.

Class Materials

Pencils, Glue Stick, Notebook Paper
Binder with dividers
Folder for handouts
TI-83+ or TI-84+ Graphing Calculator

Strategies for Success

- Keep absences to a minimum
- Follow classroom instructions/discussions and participate group activities
- Maintain an organized notebook
- Complete all assignments
- Seek help in class or attend tutorial sessions

Classwork/Homework

Students are expected to complete all assignments and to submit assignments on time. The homework and classwork assignments are designed to enhance and assess students' understanding of course concepts and prepare students for the unit assessments.

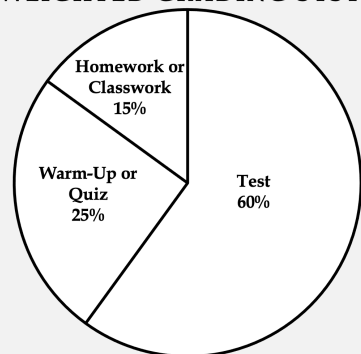
Tests

Tests are scheduled at the end of each unit. All tests are cumulative. If a student is absent on the review day prior to a test, they are still expected to take the test since new concepts are not introduced during the review.

GCS Grading Scale

- A (90 - 100)
B (80 - 89)
C (70 - 79)
D (60 - 69)
F (0 - 59)

WEIGHTED GRADING SYSTEM



Class Expectations

- ✓ Students are expected to report to class on time and be prepared for class.
- ✓ Students are always expected to be respectful and courteous towards peers and adults in the classroom.
- ✓ Students are expected to submit class assignments/classwork on time.
- ✓ Students are expected to refrain from using cellphones/smartwatches/earbuds during class instruction and class assessments.
- ✓ Students are not permitted to consume food/drinks during class; **bottled water is permitted.**

SEHS Attendance Policy

When students miss instruction, they will be provided a meaningful opportunity to learn missed content via missing graded work, tests, instruction, etc. Upon returning from an absence, make-up learning must be completed within 2 school days plus the days missed (e.g. 3 days absent equates to 5 school days to complete missed learning) with the maximum amount of time being 15 school days. A student's failure to complete the makeup learning after the teacher has made adequate effort to coordinate the makeup process with the student and a reasonable time has passed, the student's zero will remain.

SEHS Grade Recovery Policy

A grade recovery option will be available to students who are failing the course at the end of 1st quarter (Fall semester) and 3rd quarter (Spring semester). Grade recovery provides failing students the opportunity to demonstrate proficiency on 1st/3rd quarter course standards to improve their quarter grade to a 60. The work assigned will be tailored to ensure that students can demonstrate proficiency on standards they have not yet mastered. Grade recovery is a 10-day window (5 days before end of quarter and 5 days after the end of the quarter) for students to complete the assigned work, attend tutorials, and any other teacher required remediation. If students do not participate in grade recovery in 1st or 3rd quarter, their earned numerical grade will remain. Students should work to show proficiency in 2nd and 4th quarters of their courses to improve their final grade as there will not be a grade recovery option at the end of each semester.

Tutorials

Tuesday Mornings
Room 2202 Annex
8:30 am - 9:15 am

HONORS NC MATH II COURSE TOPICS

Unit	Big Ideas	Topics	Unit	Big Ideas	Topics
<u>1a</u> Quadratic Functions and Transformations (4 weeks)	Identifying key features of quadratic functions: vertex, axis of symmetry, maximum or minimum, concave upward or concave downward, domain and range Identify different representations of quadratic functions: Standard form, Vertex form, and Factored Form	- Naming polynomials - Function Notation - Operations with Functions - Interval Notation - Domain & Range - Key Features of Quadratic Functions	<u>4</u> Triangle Congruence & Similarity (2 weeks)	When comparing two similar figures, corresponding angles are congruent and corresponding sides are proportional Dilations and the properties of similar triangles allow for the application of trigonometric ratios to solve real-world situations.	- Properties of parallel lines (Angle pairs) - Triangle Congruence Theorems & Proofs (ASA, AAS, SAS, SSS, HL, CPCTC) - Similarity - Proportions in Triangles
<u>1b</u> Quadratic Equations (3 weeks)	Quadratic equations represented in different ways can be solved using multiple methods; all resulting in the same answer. Using the structure of the quadratic equation can lend to an appropriate method to solving the quadratic equation.	- Solving Quadratic Equations - Systems of Non-linear equations - Linear & Quadratic Regression	<u>5</u> Theorems About Triangles (3 weeks)	Geometric properties and theorems involving triangles.	- Triangle-Angle-Sum Theorem - Exterior Angle Sum Theorem - Isosceles/Equilateral Triangle Theorems - Lines in Triangles (Mid-Segments, Medians, Bisectors, Altitudes) - Right Triangle Trigonometry - Angles of Elevation and Depression
<u>2</u> Variation and Square Root Functions (1 week)	Key features of inverse and radical functions are the domain and range, x and y intercepts, and end behaviors of the graphs. The key features describe the characteristics of the graph and are used to help graph the function.	- Direct & Inverse Variation - Key Features of Rational Functions - Solving Rational Equations - Key Features of Radical Functions - Operations with Radicals - Solving Radical Equations - Solving Radical Inequalities	<u>6</u> Probability (1 week)	Probability provides a process to determine the likelihood of events and determine whether the occurrence of one event makes some other result more or less likely. The rules of probability can lead to more valid and reliable predictions about the likelihood of an event occurring.	- Union and Intersection - Venn Diagrams - Conditional Probability - Probability Rules - Relative Frequency Experimental vs. Theoretical Probability
<u>3</u> Transformations and Symmetry (3 weeks)	Apply the understanding of the geometric postulates and theorems. Geometric descriptions of transformations of figures of rigid motion are used to determine if two figures are congruent. Proving and applying congruence provides a basis for modeling situations geometrically.	- Translations - Reflections - Rotations - Dilations - Compositions of Transformations	<u>Final Exam (GCFE) Schedule</u> - 1st Block (January 22, 2025) - 2nd and 4th Block (January 23, 2025)		