**Honors NC Math 2**

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| **Instructor:** Ms. Ayana Barry-Buchanan | **Course Semester:** Spring 2018 |
| **Email:** aa.barry-buchanan@cms.k12.nc.us | **Website:** [barrybuchanan.weebly.com](http://barrybuchanan.weebly.com) |
| **Phone:** (704) 286-6243 | **Office Hours:** Tuesdays & Thursdays 2:30 – 3:30pm |

**COURSE OVERVIEW**

NC Math 2 continues a progression of the standards established in NC Math 1 which include concepts of algebra, geometry, functions, number and operations, statistics and modeling throughout the course. Included in these concepts are expressions in the real number system, creating and reasoning with equations and inequalities, interpreting and building simple functions, expressing geometric properties and interpreting categorical and quantitative data. In addition to these standards, NC Math 2 includes: polynomials, congruence and similarity of figures, trigonometry with triangles, modeling with geometry, probability, making inferences, and justifying conclusions.

**PREREQUISITES/COREQUISITES**

Taking NC Math 2 requires that you have successfully passed NC Math 1.

**COURSE OUTLINE**

**Unit 1:** Transformations

**Unit 2:** Quadratics

**Unit 3:** Radical and Rational Functions

**Unit 4:** Similarity and Congruence

**Unit 5:** Special Right Triangles

**Unit 6:** Probability

**REQUIRED TEXTS AND RESOURCES**

* Walch Integrated Math, North Carolina Math 2 Student Workbook, 2017

**BIG GOALS**

* Every student will achieve at least 80% mastery on all NC Math 2 objectives.
* Every student will pass the NC Math 2 Final Exam.
* Students will take ownership of their performance in NC Math 2 and of their education in general.

**ATTENDANCE AND PUNCTUALITY**

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| Absences | Math is a subject that BUILDS on itself layer upon layer, like a brick wall. If you are missing understanding at some layer then all the ‘bricks’ above that ONE will be weakened. It is FOR this reason that a student should do all in their power not to miss class or homework from day-to-day. It is extremely important that you attend class and come ready to learn every day. By attending class every day, on time, and ready to learn, you are able to keep up with the daily lessons and assignments.  |
| Tardy | Students arriving to school late will be required to report to the main office to receive a pass to class. Students more than 45 minutes late to class will be marked absent. |

**CELL PHONES, COMPUTERS, AND OTHER ELECTRONIC DEVICES**

As Hawthorne Academy’s policy states, there are no cell phone use in any classroom or hallway on campus. BYOT stands for Bring Your Own Technology. Being able to use the technology is a privilege that must be treated as such. When students enter the classroom all devices must be on silent and out of sight. They are to use them in accordance of HAHS’s BYOT rules and only when directed to do so by Ms. Barry-Buchanan. Any use outside of these parameters, are subject to discipline. Continued abuse of the BYOT privilege will result in loss of privilege.

**FOOD AND DRINK**

No food, candy, or drink will be allowed in class, unless otherwise noted by the teacher or a medical note.

**ACCOMMODATIONS**

All accommodations provided on a 504 Plan or IEP will be followed by the teacher.

**GRADING**

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| **Semester Grading****Third Quarter (40%)**Formal (60%), Informal (20%), & Mid Term (20%)**Fourth Quarter (40%)**Formal (70%) & Informal (30%)**Final Exam (20%)** | **Formal Assessments*** Tests, projects, notebook checks

**Informal Assessments*** Classwork, homework, quizzes, warm-ups, exit tickets
 | **School Grading Scale:**90—100% = A (Excellent)80—89% = B (Good)70—79% = C (Average)60—69% = D (Minimum Passing)59% and Below = F (Failing) |

**Mastery vs. Grading:**

Though grades are important, I am more concerned with your mastery of the material rather than your grade in the class. It is my goal that all students master all objectives at a level of at least 80%. Every test and quiz that I give will not only have a grade but also mastery results. If you receive less than 80% on the assessed objective then you will receive a “Not Yet” meaning you have not yet mastered that particular objective. Students will track their progress mastery. If you work hard you will pass this class and be better prepared for higher education.

**Homework:**

Our learning does not end once you leave the classroom. We have so much to learn before the end of the year and very little time. Thus, homework is never optional and is included as part of your grade. If you do not understand what we are doing in class and are having trouble completing homework, please come see me so that I can help you. You will have homework every day.

**MAKE UP WORK/ LATE WORK**

**Make up Work:**

A Student who misses homework assignments or other assignments or due dates because of absences, whether excused or unexcused, will be allowed to make up the work. Arrangements for completing the work should be made within five (5) school days of the date of the student’s return to school and include a schedule for completion of the work. Students must initiate the contact with the teacher.

**Late work:**

1. Homework and other assignments will be accepted, even if turned in after the designated date.
2. Students will receive an initial score of zero (0) for an assignment or assessment on which he or she made no attempt or which is missing.
3. Credit for late work shall be awarded according to the following guidelines:
	1. If the student was present in class on the due date, the work will be penalize 20 points.
	2. If the student was not present in class on the due date because of an excused absence, full credit will be given for the completed work.
	3. If the student was present in class on the due date because of an unexcused absence, the work will be penalized 20 points.
4. No work will be accepted 5 days after the original due date.

**RESUBMISSIONS**

If a student scores below 79 on a test, he or she must be given the option to retake a test with a qualifier. A qualifier is a clause in the policy that must be met before the student is able to retest.

Qualifier:

* Retests must be done after school
* Test Corrections must be completed
* Students must come to one tutoring session

Students who retest will receive the average (mean) of the 1st (original score) and the 2nd (retest score). The original score shall never go below a 50(F). This will give the student the opportunity to make improvements.

**PLAGIARISM/ACADEMIC OFFENSES**

1. Academic dishonesty includes such things as cheating, inventing false information or citations, plagiarism and helping someone else commit an act of academic dishonesty. It usually involves an attempt by a student to show possession of a level of knowledge or skill that he/she does not possess.
2. Course instructors have the initial responsibility for detecting and dealing with academic dishonesty. Instructors who believe that an act of academic dishonesty has occurred are obligated to discuss the matter with the student(s) involved. Instructors should possess reasonable evidence of academic dishonesty.
3. Instructors who are convinced by the evidence that a student is guilty of academic dishonesty shall assign an appropriate academic penalty. If the instructors believe that the academic dishonesty reflects on the student's academic performance or the academic integrity in a course, the student's grade should be adversely affected. A failing grade on the particular paper, project or examination will be recorded.

**Important Note:** Any form of academic dishonesty, including cheating and plagiarism, may be reported to the office.

**CLASS EXPECTATIONS**

**Rules**

1. Respect yourself, your teachers, and all others at ALL times
2. Come to class on time and prepared to learn
3. We will help others and ask for help when we need it
4. Follow directions the FIRST time they are given
5. Keep your feet, hands, and other objects to yourself.

**Respecting the Speaker**

In order for clear communication and understanding with the content students must respect their peers and the teacher while they are speaking. It is disrespectful to talk when other are presenting valuable information to the class, and it disrupts other people’s ability to learn. During times when you have been given permission to talk freely or work independently, I expect your attention within seconds. Do not leave your desk or sharpen your pencil when someone is presenting.

**Entering the Classroom**

Class begins as soon as you arrive. When you enter, you will proceed to the bookshelf to pick up your notebook. If you need to sharpen your pencil, this is the appropriate time to do so. Then you will move quietly to your seat and start your work. Every day, you will complete a Do Now, or “Opener,” at the beginning of class.  You should take out any homework and place it on your desk at this time.

**Exiting the Classroom**

The bell is a signal to the teacher that it is time for class to end. **The bell, however, does not dismiss the class.** When dismissed, you should drop off any class work that I am collecting in the appropriate bin. You will then quietly – without running, pushing, etc. – exit the class. Before you leave, you will collect your things and pick up any trash around your desk. **Leave your space better than you found it!**

**OTHER POLICIES**

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| Criteria for Credit | * Work must be properly labeled with name, date, block, and title of assignment
* Directions must be followed
* ALL work/steps for each problem must be shown and in legible handwriting
* Answers must be clearly marked
* Sufficient effort must be shown to complete assignment
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**Course policies are subject to change.** It is the student’s responsibility to check the course website for corrections or updates to the syllabus. Any changes will be posted on the course website.

**CMS Course-at-a-Glance Math 2**

**Unit 1 Title: Transformations**

**Standards:** G.CO.2, G.CO.3, G.CO.4, G.CO.5, G.CO.6, G. SRT.1, G. SRT.1a, F.IF.1, F.IF.2

In this unit, students will understand translations, reflections, rotations, dilations and congruence transformations. In addition, transformations will be explored as functions.

**Unit 2 Title:  Quadratics**

**Standards:** N.CN.1, A.SSE.1, A.SSE.1a., A.SSE.1b, A.SSE.3, F.IF.4, F.IF.7, F.IF.8, F.IF.8a, F.IF.9, F.BF.1, F.BF.3, A.REI.4, A.REI.4a, A.REI.4b, A.REI.7, A.CED.1, A.CED.2, A.CED.3
In this unit, students will create, graph and interpret key features of quadratic equations using standard form, vertex form (completing the square) and the x-intercepts. Students will be introduced to complex numbers and interpret parts of a quadratic and square root function, including terms, factors, coefficients, and exponents. Students will know the transformations caused by constants in quadratic functions and create and solve systems of linear and quadratic equations to model situations in context.

**Unit 3 Title:  Radical and Rational Functions**

**Standards:** F.BF.1, F.BF.3, F.IF.4, F.IF.7, F.IF.9, A.SSE.1a, A.SSE.1b, A.CED.1, A.CED.2, A.CED.3, A.REI.1, A.REI.2, A.REI.11, N.RN.1, N.RN.2, N.RN.3

In this unit, students will explore and apply the properties of exponents and write a function that describes a relationship between two quantities by building square root functions with real solution(s) and inverse variation functions. Additionally, students will analyze, compare, and contrast quadratic, square root, and inverse variation functions by generating different representations and solve radical systems of equations both graphically and algebraically.

**Unit 4 Title:  Similarity and Congruence**

**Standards:** G.CO.6, G.CO.7, G.CO.8, G.CO.9, G.CO.10, G.SRT.1b, G.SRT.1c, G.SRT.1d, G.SRT.2, G.SRT.3, G.SRT.4

In this unit, students will understand congruence in terms of rigid motions, prove geometric theorems, and make geometric constructions. Students will be able to determine if 2 figures are congruent by comparing corresponding parts; triangles can be proven congruent without having to compare all corresponding parts; and that angles and sides of isosceles and equilateral triangles have special relationships.

**Unit 5 Title:  Trigonometry**

**Standards:** A.SSE.1a, A.CED.1, G.SRT.4, G.SRT.6, G.SRT.8, G.SRT.12, G.CO.10

In this unit, students will understand similarity in terms of side ratios, define trigonometric ratios, and use the Pythagorean Theorem to create and solve problems involving right triangles in terms of a context. Students will use theorems about triangles to prove relationships in geometric figures and develop properties of special right triangles to solve problems.

**Unit 6 Title:  Probability**

**Standards:** S.IC.2, S.CP.1, S.CP.3, S.CP.3a, S.CP.3b, S.CP.4, S.CP.5, S.CP.6, S.CP.7, S.CP.8

In this unit, students will understand and evaluate random processes underlying statistical experiments and evaluate reports based on data.  Students will understand independence and conditional probability and use them to interpret data, as well as use the rules of probability to compute probabilities of compound events.

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**Honors Math 2** **Syllabus Acknowledgement**

**Student:** I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(print name), have read the Syllabus and understand the standards to which I am being held in Honors Math 2. I understand that Ms. Barry-Buchanan has extremely high expectations for her students, and I am going to have to work hard in this class to meet them.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature Date

**PARENT/GUARDIAN:** By signing below, I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, acknowledge that I have read the course syllabus and that I am aware of what is expected of my student in Math class for the 2017-2018 school year.

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Parent/guardian signature Relation to student Date

 **Home Information:**

 Address:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Home Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Cell Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Work Information:**

 Work Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Extension: \_\_\_\_\_\_\_\_\_\_ Can you receive calls at work?    Yes    N0

 **Preferred way of contact** (Circle all that apply):  Phone [Home  / Cell  / Work]    Email Mail

 **Preferred day/time preferences for parent-teacher meetings**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 What is the best time of day to contact you? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Is there another guardian/grandparent/sibling/family friend/ that I should contact**? If so, provide:

 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Relationship to student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Home Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Cell Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Work Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Preferred way of contact (Circle all that apply): Phone [Home  / Cell  / Work]    Email Mail

 Do you preferred to be contacted in English or Spanish, or another language?

 Does your student have access to any of the following (Check all that apply)?

Computer\_\_\_\_\_\_\_\_   Internet\_\_\_\_\_\_\_\_     Printer\_\_\_\_\_\_\_\_