Thornton High School
9351 North Washington & Thornton, CO 80229
Office: (720) 972-4800 & Fax: (720) 972-4999
http://www.thorntonh.adams12.org

Adams12 Five Star Schools

School Year	**2017-2018**	**Teacher Name**	**Melissa Abeyta**
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Course Name	**Pre IB/MYP 9 Standard Level Prep**
Course Description	CMIC 1 begins the integrated development of high school mathematics. Students will develop the ability to recognize and describe important patterns that relate quantitative variables, visual relationships and statistical relationships; to use data tables, graphs, words and symbols to represent these relationships; and to use reasoning and calculating tools to answer questions and solve problems. Focused units of study include: variables and functions, algebraic expressions and recurrence relations; coordinate graphing, data tables and spread sheets; equations and inequalities. Other topics include distributions of data, dot plots, histograms, and box plots; measures of center and their properties and measures of variability. Linear functions, slope of line, rate of change, data patterns, solving linear equations and inequalities, and equivalent linear expressions are included. The concepts of exponential growth and decay functions, data modeling, growth and decay rates, half-life and doubling time, compound interest, and properties of exponents will be developed. In the math standard of Shape and Geometric Relationships students will cover triangle inequality, congruence conditions, special quadrilaterals, Pythagorean Theorem, properties of polygons, and properties of polyhedral and Platonic solids. The math standard of Patterns, Functions, and Algebraic Relationships continues with quadratic functions and their graphs, applications to projectile motion and economic problems, expanding and factoring quadratic expressions, and solving quadratic equations. The math standard of Statistics and Probability is explored including sample spaces, equally-likely outcomes, probability distributions, mutually exclusive events, Addition Rule, simulation, random digits, discrete and continuous random variable, Law of Large Numbers, and geometric probability CMIC 2 continues by reviewing and extending students' abilities to recognize, describe, and use functional relationships among quantitative variables, with an emphasis on relationships that involve two or more independent variables. Students will also work on strengthening their understanding of coordinate methods for representing and analyzing properties of geometric shapes and describing geometric change. In the unit of regression and correlation students will work on understanding the characteristics and interpretation of the least square regression equations and the use of correlation to measure the strength of linear association between two variables. Within the standard of Patterns, Functions, and Algebraic Methods students will be introduced to function notation, constructing and reasoning with functions that model parabolic shapes and other quadratic relationships with more emphasis on symbolic reasoning methods and introducing common logarithms and algebraic methods for solving exponential equations. Trigonometric methods will develop student understanding of trigonometric functions and the ability to use trigonometric methods to solve triangulation and indirect measurement problems. Final units in Course 2 will increase students' abilities to understand and visualize situations involving chance by using simulation and mathematical analysis to construct probability distributions.

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	Integrated Math courses emphasize the teaching of mathematics as problem solving, communication, and reasoning, and emphasize the connections among mathematical topics and between mathematics and other disciplines. The multi-period sequence of Integrated Math replaces the traditional Algebra I, Geometry, Algebra II sequence of courses, and usually covers the following topics during a three- or four-year sequence: algebra, functions, geometry from both a synthetic and an algebraic perspective, trigonometry, statistics and probability, discrete mathematics, the conceptual underpinnings of calculus, and mathematical structure. International Baccalaureate (IB) Mathematics, Middle Years Program courses are built on a framework of five branches of mathematics: number, algebra, geometry and trigonometry, statistics and probability, and discrete mathematics. The program encourages students to develop an understanding of mathematical reasoning and processes, the ability to apply mathematics and evaluate the significance of results, the ability to develop strategies for problems in which solutions are not obvious, and the acquisition of mathematical intuition.

Unit of Study	Grade Level Expectations/Content Standards	Approximate Time Spent or Percent of time Spent	Targeted Date of Assessment
MYP 9: Chapter 5 Set and Venn diagrams	Students will understand that the real number system can be represented by sets of numbers which are interconnected in a Venn Diagram. **(Standard 3.3)**	4 weeks	Quarter 1
MYP 9: Chapter 1 Algebra (Notation and Equations)	Students will understand that linear functions can be represented a variety of ways. **(Standards 1.2, 2.1, 2.2, 2.3)**	3 weeks	Quarter 1
MYP 9: Chapter 2 Indices (Exponents)	Students will understand the connections between the multiple representations (table, graph, rule, situation, etc.) of exponential functions. Also, students will understand and use index laws, scientific notation, solving exponential equations, and rational exponents. **(Standards 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 3.1)**	4 weeks	Quarter 1/2
MYP 9: Chapter 3 Algebraic Expansion and Simplification	Students will understand how to add, subtract, multiply, and divide monomials and polynomials (algebraic expressions). **(Standards 1.2, 2.1, 2.2, 2.3)**	3 weeks	Quarter 2
MYP 9: Chapter 4 Radicals (Surds)	Students will understand how to perform operations on radicals, simplest radical form, and rationalizing fractions involving radicals. **(Standards 1.1)**	3 weeks	Quarter 2
MYP 9: Chapter 6 Coordinate geometry	Students will understand that coordinate methods are used to represent polygons and circles as well as prove shapes using coordinate geometry. **(Standards 2.4, 3.1, 4.1, 4.2, 4.3, 4.5)**	5 weeks	Quarter 3
CMIC 2 : Unit 1 Functions, Equations, and Systems	Students will understand algebraic thinking and problem solving of functions and equations involving several independent variables as well as systems of linear equations with two variables. **(Standards 1.2, 2.1, 2.3, 2.4)**	3 weeks	Quarter 3
CMIC 1: Unit 7 Quadratic Functions	Students will understand that quadratic functions can be used to model real-world situations. **(Standards 1.2, 2.1, 2.3, 3.1, 4.4)**	6 weeks	Quarter 4

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Grading Scale		Grade Percentages/Weights	
A	90-100	Summative Assessments & Projects	80%
B	80-89	Formative Assessments & Projects	20%
C	70-79		
D	60-69	*Weekly progress grades are posted at https://ic.adams12.org/campus/portal/adams12.isp	
F	59 or below		

General Expectations

- Grades are based upon the demonstration of proficiency on units associated with a standard given during each formative or summative assessment. Formative grades in addition to summative unit assessments will be used to holistically determine your grade.
- **Summative: 80%** Summative measures of achievement are taken when unit master is expected. (i.e., unit tests, culmination of a project, embedded assessments, etc.)
- **Formative: 20%** Formative assessments measure the scaffolding skills and/or content embedded in the unit. Formative assessments are taken frequently, after a student has practiced a skill or become familiar with content. Examples of formative assessments include but are not limited to exit tickets, paragraphs, oral check for understanding, warm-ups, stages in a large project, etc.
- Assessments will be graded based on teacher/district/state rubrics.
- On group projects, students will receive a grade for individual work and a group grade.
- Grades are based on achievement of Content Standards and Grade Level Expectations.

Grading Policy

- In order to receive a passing grade, a student **must ATTEMPT ALL summative assessments**. If no attempt to take a summative assessment has been made, a "**no evidence**" grade will be recorded until the assessment is completed.
- "**No evidence**" could be defined as not attempting the assessment, not being present for the assessment, or showing no evidence of proficiency of the standard. **NE** will be equal to 0%.
- The presence of a "**no evidence**" (NE) **for any summative assessment at the end of a grading period** will **result in a grade of F for the course** regardless of performance on other assessments.
- Summative assessments must be taken within a reasonable amount of time after they are first given unless otherwise arranged with the teacher. It is the student's responsibility to know when assessments are given and schedule a time to make them up or retake them.

Re-take Policy

- First and second semester final exams **ARE NOT** eligible for retake.
- A student is allowed to retake any summative assessment up to ten (school) days after the original summative assessment has been graded and communicated to the student. After the ten days, the eligibility for retake will expire unless prior arrangements have been made with the teacher.
- All retakes will be for full credit.
- On the first retake, the student will need to provide a body of evidence of learning as determined by the teacher. The teacher must allow a reasonable period of time for student completion of the body of evidence.

Class Expectations

Missing or incomplete assignments/assessments for this course: Superintendent Policies 6280 Homework and 6281 Make-Up Work, will be followed for this course.

Homework Policy

- Typically homework will be assigned twice a week one homework will be assigned on Monday and due Wednesday and the second homework will be assigned on Wednesday due Friday.
- Weekly formative quizzes will be given on the homework and any content material covered in class.
- In addition to these homework assignments, I may ask the student to finish an investigation we are working on in class at home.
- The expectation is that these assigned investigations will **at least be attempted before the next scheduled class day**, so that students are able to ask questions & contribute to classroom discussions.

Student Expectations

HOUSE GENEVA EXPECTATIONS

The following expectations and policies describe what we expect from you as members of the Geneva Core. These expectations should be followed in all classes in the house.

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Attending Skills

- We will focus on the following attending skills for the next two years:
  1. **BEING IN THE MOMENT**
  2. **APPROPRIATE BODY LANGUAGE**
  3. **APPROPRIATE EYE CONTACT**
  4. **APPROPRIATE FEEDBACK**
  5. **QUESTIONS TO CLARIFY OR VALIDATE**

Behavior Policy

- Each student is expected to behave **appropriately and respectfully** to the teacher **and** other students.
- Each day you will be allowed **three (3) redirects** from the teacher based on your attending skills.
- If the behavior continues after three redirects you will be required to leave the classroom and fill out a **Problem Solution Sheet**.
- You need to have a **discussion** with the teacher and **have them sign** the Problem Solution Sheet. Your teacher will tell you when it is best to hold this conversation. Times can include after class on the same day, during a lunch period, or even before class the next day.
- Students will not be able to re-enter the classroom until the form has been filled out and signed and a discussion between the teacher and student has taken place.
- If a student gets more than **two (2)** Problem Solution Sheets a week, they will be referred to their dean.

Tardy Policy

- Each teacher will have a **tardy book** located near the entrance door of the classroom.
- If you are late, you are to enter class in an appropriate manner and create an entry in the tardy book.
- You will need to fill in your **name, the date & time, and your honest reason** for being tardy. If the entry is not made, you will be remain marked as absent, so please make sure to complete the entry.
  - We ask that you be honest with your reason for being late and that you do not skip over this portion of the entry. Failure to do so will result in that tardy counting as double for the quarter.
- Excessive tardiness will result in parent notification, lunch detention, and/or referral to dean.

ID Policy

- Every student must wear their ID:
  - In clear view
  - Above the waist
- If a student does not have their ID, a new one will be issued and either delivered to the class or retrieved by the student from the Attendance Office at the student's expense

Electronics Policy

- Students will be given **one verbal warning** at the start of class each day to turn off and put away their electronic devices.
- Any electronic devices **out after the first warning will be taken** and stored in a safe space until it can be given to the Student Relations office.
- The phone can be retrieved **at the end of the school day** from the Student Relations office--or the student may speak with their dean to try to retrieve it earlier.
- Habitual offenders will result in parent notification and/or referral to the dean.
- You can only use your electronic devices at the teacher's discretion and with their verbal permission.

Classroom Materials Policy

- We expect you to bring the appropriate materials to class everyday (pencil, paper, notebook, etc). It is not the teacher's responsibility to provide these items for you.