

Gr. 6, 7, 8 Advanced Math

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The aims of IB Advanced Mathematics courses are to encourage and enable students to:

- enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- develop an understanding of the principles and nature of mathematics
- communicate clearly and confidently in a variety of contexts
- develop logical, critical and creative thinking
- develop confidence, perseverance, and independence in mathematical thinking and problem-solving
- develop powers of generalization and abstraction
- apply and transfer skills to a wide range of real-life situations, other areas of knowledge and future developments
- appreciate how developments in technology and mathematics have influenced each other
- appreciate the moral, social and ethical implications arising from the work of mathematicians and the applications of mathematics
- appreciate the international dimension in mathematics through an awareness of the universality of mathematics and its multicultural and historical perspectives
- appreciate the contribution of mathematics to other areas of knowledge
- develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics
- develop the ability to reflect critically upon their own work and the work of others.

Expectations

Participate - Participate in classroom instruction. Pay attention.

Prepared - Bring all materials and assignments to class every day. Do your homework. Study.

Prompt - Come to class on time, take a seat, and be ready to learn.

Polite - Be respectful to both your peers and the classroom. Do not disrupt the learning environment.

Practice - Complete all assignments in a timely manner (see late work policy) and show all work when necessary.

Conduct Grade

Above Average Knight Behavior 1	<ul style="list-style-type: none">• Is a positive role model, who leads quietly or outwardly• Shows kindness and care for others• Is always respectful of Mrs. Bowers and fellow students• Works to improve the classroom atmosphere by taking risks and asking questions during lessons• Takes an active part in bell work, textbook work, class discussions, and partner work; can be regularly relied upon to answer questions in class• Is a self-starter of all assignments and seeks to help others• Completes all HW packets, IXL, and assessments to the best of their ability, with honesty and integrity• Respects and uses calculators and chromebooks as assigned• Arrives on time and immediately begins bell work• Consistently completes homework packets and IXL lessons on time
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<p>Satisfactory Knight Behavior</p> <p>2</p>	<ul style="list-style-type: none"> • Contributes positively to class • Shows respect for others • Comes to class prepared and on time • Demonstrates personal and academic integrity • Listens and talks when appropriate • Does what is expected • Willing to help others • Respects and uses calculators and chromebooks as assigned
<p>Needs Improvement Knight Behavior</p> <p>3</p>	<ul style="list-style-type: none"> • Needs frequent reminders by the teacher to stay on task and/or behave appropriately • Needs improvement in showing respect and kindness to classmates/Mrs. Bowers • Sometimes comes to class unprepared and/or does not complete work • Distracts other students' learning (i.e. constant talking) • Occasionally displays a negative or uncooperative attitude • Irresponsible with calculators or chromebooks
<p>Unsatisfactory Knight Behavior</p> <p>4</p>	<ul style="list-style-type: none"> • Is a disruptive influence on the class, negatively impacting the learning environment • Shows a lack of respect for Mrs. Bowers/fellow students • Is disrespectful or unkind to others, in actions or words • Regularly comes to class unprepared and puts forth little effort in HW packets, IXL assignments, and assessments • Demonstrates a lack of personal and academic integrity (i.e., does not complete work independently) • Steals or damages calculators or chromebooks • Regularly displays a negative or uncooperative attitude

Curriculum

6th Grade Accelerated

In sixth grade, the instructional time emphasizes five areas of emphasis, with one being fluency in performing operations with integers, positive fractions, and positive decimals. The scope and sequence for sixth grade was purposefully written to spiral content so that students can build both number sense and confidence.

Math Nation 6th Grade Accelerated

(ISBN: 978-1-952882-23-6)

7th Grade: PreAlgebra

This course prepares students for Algebra I in 8th grade. Our focus will be on integers, rational and real numbers in order to set the stage for equations, inequalities and functions. Students will represent numbers in scientific notation, generate equivalent numerical and algebraic expressions using the laws of exponents, create and reason about linear relationships, develop an understanding of the concept of a function, and analyze two dimensional figures, particularly triangles, and apply the Pythagorean Theorem. Students will encounter real-world applications to the more abstract algebraic concepts.

Math Nation 8th Gr: Pre-Algebra

(ISBN: 978-1-952882-50-0)

8th Grade: Introduction to Algebra

In this course, students will be given the opportunity to delve deep into the first semester of Algebra 1. This course lays the foundation for students to be successful in Algebra 1 in high school. Students will learn an introduction to functions, extend laws of exponents to include rational exponents, perform operations with polynomials and radicals, and work with linear functions. Students should be procedurally fluent with operations with rational numbers and laws of exponents including integer exponents by the time they enter this course. This course is listed as PreAlgebra-8 in PowerSchool. **There will be no high school credit offered for this course.**

Math Nation Algebra 1 (ISBN: 978-1-952882-59-3)

8th Grade: Honors Algebra 1

In this course, students will participate in a rigorous study of Algebra 1 and take an end of course exam for potential high school credit. Students will perform operations with polynomials and radicals, extend laws of exponents to include rational exponents, and work with linear, quadratic, absolute value, and exponential functions. Students should be procedurally fluent with operations with rational numbers and laws of exponents including integer exponents by the time they enter this course. **In order to receive high school credit, your student must pass the course with a B average or higher and a passing score on the end of course (EOC) exam.**

Math Nation Algebra 1
(ISBN: 978-1-952882-59-3)

Grading Scale

Tests -40% of final grade. Tests are given at the end of a unit. If a student is absent for a test, it is the student's responsibility to schedule a make up time.

Quizzes - 30% of final grade. There will be several quizzes given throughout each chapter and are designed to prepare students for the upcoming unit test. If a student is absent for a quiz, it is the student's responsibility to schedule a make-up quiz.

Classwork - 20% of final grade. Classwork from IXL, Khan Academy, or Desmos will be given periodically in order to reinforce skills in class.

Homework - 10% of final grade. Homework packets are meant to reinforce skills taught in class. It is crucial to the learning process and it is the expectation that it will be completed when assigned. Students are responsible for writing all assignments and the due dates in their planners.

All work must be shown on assignments in order to receive full credit

Late Work Policy

- Late work will be accepted under certain conditions.
- 5-10 points will be deducted from the final grade depending on how late the work is
 - 5 points - up to one week late
 - 10 points - more than one week late
- Work assigned before progress reports must be turned in by progress report time halfway through the quarter. It will not be accepted in the second half of the quarter.
- Students will be sent to study hall if they will benefit from the time to make up any late work.

Supplies

Students are required to bring ALL the materials listed below to each class.

- 1 composition notebook (for notes)
- 3 ring binder with three dividers (for organizing HW, handouts/graded work, blank paper/scratch work)
- loose leaf paper (for showing work)
- sharpened pencils (ALL math work will be done in pencil; pens may only be used when self-grading HW during class time)

Communication

Google Classroom

Homework and IXL due dates will be posted in the class on Google Classroom regularly. Parents are invited to use this tool to help monitor their child's assignments and important dates.

E-mail

The most effective method of communication will be e-mail. Parents should expect to receive a reply within 24 hours. Students may confer directly with me to resolve any questions or concerns about their learning with their school-issued email account if they did not have a chance in class.

Powerschool

Parents and students are responsible for checking PowerSchool on a regular basis to monitor progress. Please bring concerns to my attention as soon as they appear. We will work together to promote student progress. Questions regarding access to PowerSchool should be directed to the front office.