

Advanced Algebraic Concepts 2022-2023

Course Information											
Instructor: Chris Walters Phone: (425) 385-7132 email: cwalters@everettsd.org Extra Help Hours: 7-7:30 AM and 2 – 3 PM						Textbook: Illustrative Mathematics Online Resources: im.kendallhunt.com Class website: http://www.everettsd.org/jhs-cwalters All instructional materials can be accessed through Canvas					
Course Description											
The third year of high school mathematics asks students to pull together and apply the learning that they have from years 1 and 2. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to include general triangles. And, finally, students bring together all their experience with functions and geometry to create models and solve contextual problems.											
Learning Outcomes											
<ul style="list-style-type: none"> • Know 5 general functions: Polynomial, Rational, Exponential, Logarithmic, Trigonometric (sine, cosine, tangent) • Analyze functions using domain, range, intercepts, end behavior, symmetry, and asymptotes, vertex, line of symmetry, amplitude, period, and phase shifts • Sketch graphs of functions and their transformations with and without technology • Solve equations numerically, algebraically, and graphically: polynomials, rational, radical, exponential, logarithm and trigonometric (radians) • Compute with complex numbers: addition, subtraction, and multiplication • Write recursive definitions and explicit formulas using function notation • Find values for arithmetic/geometric sequences • Analyze data using normal distributions, histograms, and margin of error • Make and justify conclusions bases on data. • Model various situations using sequences and functions (polynomials, exponential, logarithmic and trigonometric) • Appropriately use a modeling cycle/process 											
Course Outline											
1. Sequences and Functions 2A. Polynomials Functions 2B. Rational Functions 3. Complex Numbers and Rational Exponents 4A. Exponential Functions and Equations						4B. Exponential Functions and Equations Logarithmic Functions 5. Transformations of Functions 6. Trigonometric Functions 7. Statistical Inferences					
Grades: http://www.everettsd.org/lms											
Classwork/Assignment: 15% Unit Tests and Projects: 85%											
Letter Grade	A	A –	B +	B	B –	C +	C	C –	D +	D	F
Percent	100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-60	59-0
GPA	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0.0



Our mission is to provide a rigorous curriculum that sets high standards and prepares all students for the future.

Classroom Policies & Expectations

Grading Policy

Mathematical Explanation for all problems: (may include the following but is not limited to)

- Algebraic steps
- Verbal explanations
- Graphs, tables or pictures that are clearly labeled.
- Calculator entries, when using a calculator for computation.
- Correct standard mathematical notation should be used.
- Decimal answers should be accurate to 3 places.
- Final answers can be equivalent to those provided

Classwork/Assignments:

- Expect daily assignments to practice the concepts.
- Assignments are due at the beginning of the next class, where time will be given to review answers.
- Assignments will earn 1 point for each problem
- Students are responsible for self-correcting and asking questions when they don't understand
- Late assignments will be accepted until unit test with a 10% reduction in score.
- Excused absences will have 1 week grade period before late penalty is applied

Assessments (weighted to 100 points):

- Comprised of calculator and non-calculator questions
- If you are absent the day before a test, you will still be expected to take the test.
- All tests must be completed on the day they are started.
- Typical scoring of questions
 - Multiple Choice questions: 2 points each
 - Short answer questions: 5 points each
 - Correct Solution (2 points)
 - Mathematical Explanation (3 points)

Test Correction Privileges:

- Students who are absent (unexcused) on the day of the test will lose the privilege to correct that test.
- Student must complete test corrections before the next unit test.
- Corrections will earn back $\frac{1}{2}$ the points missed up to a max score of 85%.
- Must be completed in the classroom and not during class time, unless all required daily work is complete.

Extra Credit Opportunity:

- Bonus percentage points will be added to each unit assessment for the unit's assignments.
- Overall assignment score of 97% or higher earns 3% bonus on unit assessment, 87% or higher earns 2% and 77% or higher earns 1%

Behavior Expectations

- All school wide and district policies as described in the Student Handbook will be enforced.
- Students are expected to be respectful towards their peers, teacher, and the classroom.
- A hall pass to allow one student out of the room at a time will be available. Students must sign out and back in and be gone no more than 5 minutes.
- **No Electronic Devices** (cell phone, headphones, etc.) will be allowed during class, except a calculator and a district issued device or equivalent without permission from the teacher.
- Drinks are allowed if the bottle has a closable lid (spill proof).
- Food is **not** permitted, unless required for medical reasons.

Materials

- Textbooks will be provided.
- Notebook (paper or digital) of your choice to keep your notes and classwork organized.
- Scientific calculator required. A graphing calculator, such as the TI-83+ or TI-84 is highly recommended and is required for AP courses.

Tips for Success

You can learn mathematics, but it won't happen by itself. You will have to work at it!

1. Participate in class.
2. Take and review your notes each day.
3. Attempt all problems assigned and ask about the questions you don't understand.
4. Come in for additional tutoring when you first start to struggle.