AMY LYNN **ALGEBRA II – SYLLABUS** **ROOM 1**

CONTACT INFORMATION:

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MY SCHEDULE:

1ST: ALGEBRA II
2ND: ALGEBRA II
3RD: 8th GRADE MATH
4TH: FINANCIAL LITERACY
5TH: PREP PERIOD
6TH: ALGEBRA II
7TH: ALGEBRA II

MY TEACHING PHILOSOPHY & GOALS:

I will teach my students to appreciate and utilize the analytic side of their brains as well as the artistic and creative side. By the end of the year, I want my students to confidently apply their math skills and knowledge to any problem. Ultimately, my students will always think critically and analytically about any problem presented to them in order to reach logical conclusions, both in a mathematical setting and in life. This is a college preparatory school and course; my goal is to prepare for my students for the rigor and complexity they will face in college.

CLASS RULES & EXPECTATIONS:

There's really only one rule for my class: **BE RESPECTFUL**. I expect students to follow all school and district rules, but mostly it just comes down to treating each other, ourselves, and our school with respect. This means coming to class prepared, ready to focus and ready to work, out of respect for the teacher, peers, and self. While we are in a distance learning format, please use proper online etiquette to make sure our class-time online is productive and professional.

Online etiquette guidelines:

- Listen to your teacher and follow directions as you would in class. When in Zoom meetings, MUTE yourself as directed and "raise" your hand to participate.
- When you have something to contribute and it is not your turn, you can use the chat feature to message your teacher. Wait for the teacher to call on you, then unmute yourself.
- Try to look into the camera when you are speaking.
- Stay attentive. Pay attention to the teacher or other students that are talking.
- Check your background and the room you are in before any online Zoom sessions.
- Be sure personal information is not visible.
- Never post links to Zoom sessions on social media or share with others.
- Only use video conferencing (like Zoom) under the direction of your teachers.

Please see the PAPA Student Handbook or visit paparts.org for a full list and description of all school rules and policies. Please take special note of the PAPA Attendance Policy; consistent attendance is not optional.

ATTENDANCE:

While we are engaged in distance learning, attendance will be determined via student engagement in online activities and assignments. There will be a daily check-in assignment that students will be required to finish within the first ten minutes of class. If that assignment is completed late (but on the same day it is assigned), it will count as an Unexcused Tardy and will lose 25% of the credit. If it is completed within the assigned week (but not on the day it was assigned), it will be counted as an Unexcused Absence and will lose 50% of the credit. I strongly encourage students to make a habit of logging in to Google Classroom every day promptly at the beginning of class.

COURSE GRADES:

Each quarter, students' grades will be calculated using the following scale:

PARTICIPATION:	**30%**
ASSESSMENTS:	**40%**
HOMEWORK:	**30%**

SEMESTER GRADES:

Each semester, overall grades will be calculated using the following scale:

1ST/3RD QUARTER:	**40%**
2ND/4TH QUARTER:	**40%**
FINAL EXAM:	**20%**

All students are required to take a comprehensive final exam at the end of each semester. The fall exam will include material learned over the course of the first semester. The spring semester final exam will be the New Mexico End of Course Exam and is cumulative for the whole year. Students who do not receive the cut score will be required to retake it, and if they do not pass again, students will be required to take my final exam, as this can serve as a graduation requirement

CLASS STRUCTURE:

Throughout the year, the class will implement a mix of individual, paired, and group work. Students will have daily check-in via Google Forms, posted daily in Google Classroom. While we are engaged in distance learning, we will follow a general weekly schedule:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Daily Check-In Instructional Day Homework 1 Assigned	Daily Check-In Zoom Small Group Conference Work Day Homework 1 Due	Daily Check-In Instructional Day Homework 2 Assigned	Daily Check-In Zoom Small Group Conference Work Day Homework 2 Due	Daily Check-In Assessment Day Open Office Hours Assessment 1

Mondays and Wednesdays will be Instructional Days. Instructional material will be provided in a variety of ways, including: video notes with an exit ticket, slideshow interactive notes, Zoom live-meeting lecture notes (which will be recorded and shared as a reference), and more. On Instructional Days, students will be expected to work independently on whatever material is posted for them to review. Homework assignments will be posted with the instructional material each Instructional Day, and students will have time on Tuesdays and Thursdays to finish their homework assignments and ask for help during the Zoom small-group conferences, where we will also be working through problems together. We will also work on practice problems and applications during the conference work days, so students should expect to be in a Zoom meeting for about 45 minutes on Tuesdays and Thursdays. I will be available for impromptu help sessions (Zoom Office Hours) on Fridays while students are working on that week's assessment (a quiz or test, depending on where we are in the unit). This general schedule outline may change as needs arise as we progress through the year, but students should expect to attend class every day on time and working throughout the entire class period.

It is my goal in this course to prepare students for college level content and work. I will transition from shorter to longer lectures as the year progresses, so that my students are better prepared for the type of experience they will have in college. The pace and level of difficulty of Algebra II is equivalent to freshman level college math courses, so in line with PAPA's vision and mission, this course will emphasize college preparedness.

HOMEWORK:

Homework will be assigned at least 2 times per week. Homework is due by the end of the day the day after it is assigned, unless otherwise stated. Homework is meant to help students practice skills, so I will only assign it when it's going to be helpful and meaningful. I believe that homework should help students learn, not just be a chore. While we are in a distance learning format, homework will generally consist of Khan Academy assignments, but the format of homework may vary depending on the content. We may use different online programs, we may do hand-written work to be submitted via photos. All work will be posted via Google Classroom, so make sure to check in every day and read all instructions thoroughly on each assignment.

LATE WORK: I do accept late work. All assignments submitted after the due date will automatically lose 20% of the credit, so long as it is in **BEFORE** the test over that material. I will still accept work after the test has been administered, but it will only receive 50% of the credit. Please note that I cannot accept late work after each quarter ends.

COURSE DESCRIPTION:

The bulk of Algebra II focuses on functions: their properties, graphs, and applications. We will begin the year by reviewing those functions introduced in Algebra I and progressing all the way up to exponential, logarithmic, and even trigonometric functions before transitioning into comprehensive overviews on the basic tenets of Probability & Statistics.

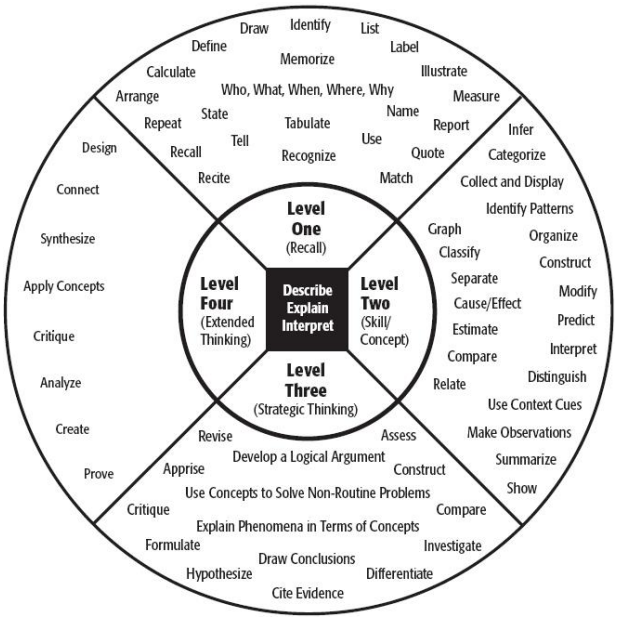
PROGRESSION

I. Linear Functions: Solving Systems of Linear Equations in 2 & 3 Variables.
II. Quadratic Functions: Completing the Square. Factoring. Complex Number System.
III. Polynomial Functions: Factoring. Polynomial Long Division. Synthetic Division. End Behavior. Multiplicity of Roots. Rational Root Theorem. Conjugate Root Theorem.
IV. *Properties of Exponents.
V. Radical Functions: Rational Exponents.
VI. Exponential Functions: Growth & Decay.
VII. *Composition of Functions. Function Operations. Inverse Relations & Functions
VIII. Logarithmic Functions: Properties of Logarithms. Natural & Common Logs. Change of Base Formula
IX. Reciprocal Functions: Discontinuities. Asymptotes.
X. *Rational Expressions: Simplifying. Solving Rational Equations.
XI. Rational Functions: Domain Restrictions. Horizontal & Vertical Asymptotes.
XII. *Angles. Radians. Unit Circle. Special Triangles.
XIII. Trigonometric Functions.
XIV. Probability: Experimental. Theoretical. Conditional. Independent/Dependent.
XV. Statistics: Measures of Central Tendency. Samples. Surveys. Normal Distribution.

*These sections contain foundational information about the nature and properties of the preceding and subsequent functions and related forms to help facilitate a fuller understanding of and fluency with these more complex algebraic functions. For a thorough discussion of the standards to be covered in Algebra II this year, please refer to the New Mexico Instructional Scope, which can be accessed at:
https://webnew.ped.state.nm.us/wp-content/uploads/2020/07/Algebra-2-New-Mexico-Mathematics-Instructional-Scope.pdf

Please note that this progression is only an outline and is subject to change throughout the year as needed, and we may need to edit the scope of the class due to time restrictions. Please check your email and Google Classroom for the weekly updates and schedules to keep informed about course progression. In all topics, students will be required to remember and understand key concepts and foundational material in order to apply, analyze, and evaluate complex mathematical problems in order to analyze real-world problems and create logical solutions. The ultimate goal is for students to be able to flow seamlessly between all strata of both the Webb's Depth of Knowledge and the Bloom's Taxonomy guidelines (pictured below for your reference) to achieve mastery and fluency in advanced Algebra.

WEBB'S DEPTH OF KNOWLEDGE



BLOOM'S TAXONOMY