Pre-Algebra
Yearlong 2022–2023

THE COURSE AT A GLANCE:

- **School Year:** September 6, 2022 - May 26, 2023
- **Target Grade Levels:** Grades 7-8, 9th-12th as placed
- **HS Credit:** Equivalent to 1 high school Credit
- **Class Section 2:** Tuesday/Thursday/Friday from 3:30 p.m. - 4:45 p.m. (EST)
- **Instructor:** Christa Maldonado
- **E-mail:** c.maldonado.scholeacademy@gmail.com
- **Office Hours:** By appointment (Please include time zone in your appointment request.)

SCHEDULE FOR PRE-ALGEBRA:

CLASS SESSIONS DATES:

Classes will be held from September 2022 to May 2023 for a total of 32 weeks (96 classes). The classes will follow the Scholé Academy Academic Calendar.

Scholé Academy Holidays (No Classes)

- Monday, September 5, 2022 (Labor Day)
- Monday, November 21 – Friday, November 25, 2022 (Thanksgiving)
- Monday, December 19, 2021 – Friday, January 6, 2023 (Christmas and New Year's)
- Monday, February 20 – Friday, February 24, 2023 (winter break)
- Monday, April 3 – Friday, April 7, 2023 (Holy Week/Easter)

September 6, 8, 9, 13, 15, 16, 20, 22, 23, 27, 29, 30
October 4, 6, 7, 11, 13, 14, 18, 20, 21, 25, 27, 28
November 1, 3, 4, 8, 10, 11, 15, 17, 18, 29
December 1, 2, 6, 8, 9, 13, 15, 16
January 10, 12, 13, 17, 19, 20, 24, 26, 27, 31
February 2, 3, 7, 9, 10, 14, 16, 17, 28
March 2, 3, 7, 9, 10, 14, 16, 17, 21, 23, 24, 28, 30, 31
April 11, 13, 14, 18, 20, 21, 25, 27, 28
May 2, 4, 5, 9, 11, 12, 16, 18, 19, 23, 24, 26

*Please note the above dates and times are the anticipated class sessions for this course. However, all dates are subject to change as the instructor's circumstances might dictate (e.g. illness, family emergency). Any classes canceled by the instructor will be made up at an alternate time designated by the instructor.

PRE-ALGEBRA COURSE MAP:

Unit 1: Arithmetic Review
Unit 2: Ratios, Percentage, and Proportions
Unit 3: Rational Numbers and Equations
Unit 4: Two and Three-Dimensional Space; Geometry
Unit 5: Linear & Nonlinear Functions
Unit 6: Data Sets

OFFICE HOURS: In addition to scheduled class times, teachers will generally designate anoptional weekly session as needed. During "Office Hours" students may raise questions, seek assistance, or review class material.

REQUIRED MATERIALS:

- Reveal Math Accelerated: Volume 1 and Volume 2
- ***Mathematics for the Nonmathematician***
- **Supplemental: The Art of Problem Solving: Prealgebra** (optional)
- Digital tablet. (NOTE: Using a digital tablet inclass allows students to more fully engage the course content by working out math problems on the digital whiteboard. We recommend the Wacom Intuos tablets, though similar products may be used.)
- Three-ring notebook dedicated to this course
- Notebook paper
- Five dividers
- Three sharpened pencils with erasers
- Graph paper
- Protractor
- Drawing compass or bullseye compass

COURSE DESCRIPTION:

The objective of a pre-algebra course is to serve as a transition from arithmetic to algebra. Students will build upon skills learned in arithmetic and begin to learn algebraic concepts. Guided by the instructor, students will develop fluency in working with rational numbers and integers; explore relationships between fractions, decimals, and percents; and develop competency in algebraic expressions, linear equations, polynomials, and inequalities. Course content will also include problem-solving, geometry, data analysis and prediction, and graphing. Students will explore connections between math and everyday applications through problem-solving and hands-on activities. Students will be required to demonstrate understanding through oral discussions and written explanations, and by working problems numerically.

Classes involve Socratic discussions, interactive lectures, interactive computer activities, peer problem presentations, collaborative group assignments, competitions, and games. The content of the course extends beyond the book. Throughout the course, we begin lessons with a study of math as a subject. We learn about the history of math and the people who discovered the methodswe are studying. We discuss how early mathematicians were led to developing the concepts, and why they are relevant to us. We study math the way the first mathematicians did; studying some of the same problems and reconstructing their methods in uncovering mathematical truths. With this framework in place, now having discovered the truth, we turn our attention to practicing the truth. We work examples and problems which help us deepen our understanding of the concept. Lastly, we learn how to use math; how to use and recognize it in real-life applications, how to use the concept to extend our understanding to new math concepts, or use the concept to extend our knowledge in other fields.

The course also includes an element of problem solving. It is my goal to convey to students that mathematics is about much more than numbers and computation. It encompasses analytical, logical, and creative thinking. Therefore, we spend time working on our problem-solving ability.

Students are presented open-ended problems that do not lend themselves to a prescribed formula or algorithm. Such problems require them to develop and employ problem-solving strategies. Consequently, the course serves an excellent preparation not only for further mathematical studies but also for the study of formal logic, such as Scholé Academy's Formal Logic:Discovery of Deduction course.

Student output consists of completing homework, classwork, labs, projects, and assessments. In all cases, student work is graded for taking an appropriate approach, providing an accurate answer, and utilizing clear communication in the form of supporting their work by showing their thinking.

Pre-algebra is a foundational course for all future mathematics courses and several future scienceand business courses; additionally, algebraic thinking is a skill that permeates daily life. Thus, thecourse is designed to develop algebraic thinking, in lieu of simply presenting steps and tricks to solve problems. The pace of the course averages one-lesson per day; depending on difficulty. Themathematical ability of the students varies and they do not all struggle with the same content.

Therefore, lab work is provided to differentiate learning based on student needs. Students who have mastered the content are provided with challenging problems that require synthesis and analysis while students who would benefit from more review are provided that opportunity.

Your student will learn the Pre-Algebra, including:

- Deductive application of content and preciously learned mathematic skills and processes:
    - Properties of Arithmetic
    - Fractions and Decimals
    - Ratios, Rates, and Percents
    - Algebraic Expressions
    - Graphing
    - Geometric Principles
    - Data Analysis and Statistics
- Understanding of mathematical skills and processes:
    - Exponents
    - Number Theory
    - Squares and Square Roots
    - Problem-Solving

STUDENT EXPECTATIONS: EXECUTIVE FUNCTION SKILLS

Students enrolled in this course will be expected to show development and eagerness in the skills needed to be a successful in their current and future courses. These skills include a student who:

1. **Engages in Learning.** Students will strive for mastery of the concepts learned and reviewedin the class. Students should be prepared to actively participate in class and throughly complete assignments. Students should show virtue through their diligence, and when necessary,willingness to ask questions.
2. **Pays Attention to Detail.** Students will thoughtfully complete their assignments. They will carefully review their work prior to submitting it. They will ensure that their work is legibleand coherent prior to submitting for grading. Students will also ensure that assignments include their name and the date.
3. **Prepares and Exhibits Responsibility.** Students will arrive to class on time and completeall of assignments. The instructor will facilitate learning and provide support, but the student will be expected to attend class, participate in learning, and complete assignments within their due dates.
4. **Practices Self-Control.** Students will practice self-control through their respect of themselves, their classmates, and their instructor. They will practice hand-raising, listening to others, thoughtful responses, and focusing on the task. Students will participant in classes by paying attention, speaking when called upon, and consistently completing coursework asassigned.
5. **Solves Problems and Receives Feedback.** Students will work independently, together,

andwith their instructor to solve problems and master concepts being learned. Students will practice giving and receiving feedback on their problem solving skills and their answers through regular interaction with the classmates and their instructor.

STUDENT EXPECTATIONS IN ACTION

Students enrolled in this course will be expected to exhibit the skills and virtues associated with ascholar of goodness, truth, and beauty. Students enrolled in this course are expected to respectfully participant in classroom discussions and activities. They will also be assigned activities to support their learning.

In this class, students will be expected to listen attentively, participate actively in class discussions and practices. Students are expected to arrive to class on time and with all assigned material completed. The instructor will facilitate learning for the student, but the responsibility for staying up-to-date with classwork and assignments ultimately falls to the student.

All assignments will be due into the appropriate Schoology Assignment folder prior to thestart of class each day. Students will submit their work by scanning their homework pagesand uploading it into the Schoology assignment window. Photographs of completed assignments will not be accepted as they are incredibly difficult to read.

STUDENT EVALUATION: GRADING

While pursing *Pre-Algebra* through Scholé Academy will be "restful", we also recognize the need to provide grades for students who will be using this course as part of their prepared college transcript. It's a delicate balance to achieve both restful learning and excellent academic performance. Earning a specific grade should not overshadow achievement goals formastery of this discipline.

 Pre-Algebra consists of a transitional study from arithmetic to algebra and geometry. The concept of restful learning and the classical education principles of seeking Truth, Good-ness, and Beauty will be explored through the analysis and application of mathematics. As the teacher, I can assign the following grades to your student's level of achievement: *magna cum laude* (with great praise); *cum laude* (with praise); *satis* (sufficient, satisfactory) and *non satis* (not sufficient).

Ideally, every average student working diligently should do praiseworthy work (cum laude). Those who excel beyond this expectation will be the *magna cum laude* students. Students who do adequate but not praiseworthy work be designated *satis*. *Non satis* means lacking sufficiency or adequacy.

Inasmuch as you might be fully on board with this grading method in theory, there will undoubtedly be the need to complete a college transcript with either a numeric or traditional letter grade. Traditional percentage grades will be provided and will be readily accessed onthe *Pre-Algebra* Schoology page. Additionally, Mrs. Maldonado will provide a

transcript of that grade to the requesting parent at the end of the year.

STUDENT EVALUATION: MASTERY PORTRAIT

Mastery portrait: Students who take this course are building the foundations they need for geometry and algebra. The student will be expected to gain mastery of the concepts in the course. The student who shows mastery will approach problems with reflection and thoughtfulness. The student will follow a methodological approach to finding solutions of problems in a given assignment.

By the end of the course, a student who has mastered the concepts of the course and receive *magna cum laude* will:

- Deductively apply content and previously learned mathematic skills and processes including:
    - Properties of Arithmetic
    - Fractions and Decimals
    - Ratios, Rates, and Percents
    - Algebraic Expressions
    - Graphing
    - Geometric Principles
    - Data Analysis and Statistics
- Understanding of mathematical skills and processes:
    - Exponents
    - Number Theory
    - Squares and Square Roots
    - Problem-Solving
- Consistently provide evidence of the methodological approach to a solution.
- Describe the approach and steps to finding the solution to problems.

STUDENT EVALUATION: ASSIGNMENTS, TYPES & WEIGHTS

Mrs. Maldonado will communicate with students regarding assignment feedback and grading through the free online grading system, Schoology. The teacher will provide students with more detailed information and access to the *Pre-Algebra* course page.

Student's grades will be comprised of:

1. Student Participation and Classwork: 25%
2. Homework: 35%
3. Assessments: 40%

STUDENT EVALUATION: ACADEMIC DISHONESTY

Students will often take assessment tests and/or quizzes privately at home. Students are on their honor to abide by [Scholé Academy's Learning Philosophy](#) which assumes the personal cultivation of Student-Virtues described in the Student-Parent Handbook.

Additionally, plagiarism is a serious and punishable offense. Proper citation of all sources is essential to the academic endeavor. Remember to cite any source if the information is not common knowledge or is an opinion obtained through any source. A plagiarized assignment will result in a failing grade. Students should consult their chosen style manual (see Student Expectations above) for specific direction on obtaining, quoting and paraphrasing sources.

THE VIRTUAL CLASSROOM:

We will be using the free online "virtual classroom" software provided by Zoom, one of the leading companies that provides such software. The virtual classroom will provide students with interactive audio, text chat and an interactive whiteboard in which texts, diagrams, video and other media can be displayed and analyzed. We will provide students with a link (via email) that will enable students to join the virtual classroom.

Specific information regarding the technology used by Scholé Academy (including required technology) can be found by visiting the [Technology in the Classroom](#) section of the Student Parent Handbook.

Students will submit documents by scanning and uploading them to their personal computer, then attaching those files as .pdfs to an email. They will submit their work to the *Pre-Algebra* Schoology assignment page (access granted after enrollment is secured).

ABOUT THE INSTRUCTOR:

Christa Maldonado has a love for learning and a deep enjoyment of puzzles and patterns. She enjoys identifying the patterns in nature, mathematics, and language that can lead the restful mind to contemplate the good and the beautiful. She has a Bachelor of Science in Natural Sciences from Excelsior College and a Bachelor of Science in Healthcare Management from Western Governor University. She is currently enrolled in a Master of Science in Instructional Design from Western Governor University. Although she has a great love for the patterns found in courses that give foundational structure, such as grammar and mathematics, she also enjoys learning more about the arts and sciences.

Christa is married and has three children. Her family enjoys discovering nature through hiking and camping. They live a restful life, full of good books and good food. Christa loves to read, sew, and bake. She has tutoring professionally since 2017. Christa is excited to help facilitate your child's learning about to goodness, beauty, and truth. For Scholé Academy, Christa teaches *Pre-Algebra, Pre-Algebra,* and *Pre-Algebra.*