



Fundamentals of Mathematics

Yearlong 2020-2021

ELIGIBLE STUDENTS:

6-8th graders (and advanced 5th graders) *who are planning on entering Pre-Algebra next school year or who would like a complete overview of elementary mathematics. The students entering this course should have a solid understanding of fundamental mathematic operations (addition, subtraction, multiplication, and division) as well as be familiar with positive and negative numbers, decimals, and ratios.*

Class Dates: Begin Tuesday, September 8, 2020; running through Friday, May 28, 2021.

Class Times: Monday, Tuesday, & Thursday: 11:30am — 12:45pm (EST)

Instructor: Miss Charity Jacobson

E-mail: cjacobson@scholeacademy.com

SCHEDULE FOR FUNDAMENTALS OF MATHEMATICS:

CLASS SESSIONS DATES:

Classes will take place on Monday, Tuesday, & Thursday: 11:30am — 12:45pm (EST). The school year is 32 weeks and meets weekly except for the following holiday breaks:

September 7, November 23-27, December 21-January 8, February 22-26, March 29-April 2

**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.*

FUNDAMENTALS OF MATHEMATICS COURSE MAP:

Unit 1: Numbers and Arithmetic	Unit 7: Probability and Statistics
Unit 2: Percent and Percentages	Unit 8: Statistical Representations
Unit 3: Signed Numbers and Algebra	Unit 9: Graphing on the Cartesian Plain
Unit 4: Geometry	Unit 10: Polynomial Arithmetic and Radicals
Unit 5: Area and Volume	Unit 11: Equations
Unit 6: Measurement	Unit 12: Inequalities

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

REQUIRED MATERIALS:

- Abeka’s *Intermediate Mathematics*
- Sharp Pencils with erasers
- Notebook Paper
- 3 ring binder dedicated to this course
- Notebook Dividers
- Ruler
- Protractor
- Drawing Compass
- Graph Paper
- Digital Tablet. We recommend Wacom Intuos tablets. Similar products may be used.

OPTIONAL COURSE TEXTS:

- Abeka’s *Intermediate Mathematics Solution Key*

This key can be used by the parent(s) at their discretion.

FUNDAMENTALS OF MATHEMATICS COURSE DESCRIPTION:

This course is designed to help the student bridge the gap between elementary mathematics concepts to more advanced Mathematics. At the end of the year, the student should be prepared to delve into Pre-Algebra and beyond! Throughout the year, not only will the student master fundamental math, but they will be given the opportunity to apply their math skills to real life scenarios as we discuss taxes, income, and insurance. At the end of the year, the goal is for the student to understand and be comfortable dealing with:

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|-----------------------------------|--|
| • Fractions and Decimals | • Introduction to statistics |
| • Problem-Solving Strategies | • Introduction to algebra |
| • Factorial Ratio and Proportion | • Negative numbers |
| • Application of Percent | • Powers and roots |
| • Personal Finances | • Time zones |
| • Metric System | • Latitude and longitude |
| • Probability | • Introduction to plane and solid geometry |
| • Basic geometric concepts | • Pythagorean rule |
| • Development and use of formulas | • Sine, cosine, tangent |
| • Reading and constructing graphs | |

PARENT EXPECTATIONS IN ACTION

Parents are expected to ensure that the student has:

- All of the required materials needed for the course
- A stable internet connection
- A distraction free environment during class
- Adequate time to study outside of class hours

Parent assistance with assignments is not required or expected. However, if the student is accustomed to having a parent's assistance with math, there will likely be a transition period as they gain confidence in working independently. If a student is struggling with an assignment, parents are encouraged to use the optional textbook *Basic Mathematics Solution Key* to help guide their student through the assignment.

STUDENT EXPECTATIONS IN ACTION

Ultimately, it is the student's responsibility to stay up-to-date with classwork and assignments. The instructor will facilitate learning, and the student is expected to be an active member in and out of the classroom. This means that the student:

- Will complete assigned material before the start of class
- Will arrive to class on time
- Will attend the entire class
- Will listen attentively
- Will take part in discussions (present problems, review answers, ask questions, explain answers, and think out loud)
- Will seek approved help if struggling with content or an assignment
- Will not use technology of any kind (unless pre-approved by the instructor) to complete their assignments

Mistakes are key to learning! If the student does not do well on an assignment, they are encouraged to do the assignment again (or an alternative) for full or partial credit.

Time-Commitment – The student should plan on spending around 2 ½ hours per week on their mathematics outside of class time. Depending upon the student and the math being taught, there may be weeks when less time is required and weeks when more time is required.

All assignments will be due into the appropriate Schoology Assignment folder **prior** to the start of class each day. Students turning in late work will earn a 10% penalty for each day the assignment is late. Students will submit their work by scanning their homework pages and uploading it into the Schoology assignment window. Photographs of completed assignments will not be accepted as they are incredibly difficult to read.

STUDENT EXPECTATIONS: EXECUTIVE FUNCTION SKILLS

Students enrolling in Scholé Academy's Mathematics Program will be expected to show development of Executive Function Skills throughout the year. Executive Function Skills speaks to a set of qualities and skill sets students can develop and hone to better approach the courses, lectures, readings and teachers they will face in their future academic coursework.

Executively, students are expected to be:

- 1. An Engaged Student:** One who is willing to step into the arena of class discussion, ask questions, supply answers, generate the internal dialogue necessary to determine if what's being discussed is important and necessary to himself.
- 2. Note Taking:** A student who during and after being engaged with the class has been trained to note important and relevant content in an organized fashion (Cornell Notes would be a great option). His notes would then be consulted, independently, for application in assignments and assessments.
- 3. Attention to Detail & Preparedness:** These students are ones who consistently adhere to deadlines, submission requirements, adhering to style guides and codes, confirm technology is working prior to the start of class, be responsible to determine how to proceed after an absence, be responsible for consulting his course syllabus and adjusting as the class proceeds, etc.
- 4. Employ Critiques:** These students are ones who receive feedback to one of their submissions, and then are sure to apply that feedback to future assignments rather than repeating mistakes. These students also glean information from the live class critiques of fellow students and note mistakes to avoid by learning from others.
- 5. Initiative/Maturity:** This student would hear the teacher comments and be able to assess whether or not the teacher was describing his work, and then take the initiative to schedule office hours with his teacher if necessary.

STUDENT EVALUATION: GRADING

While pursuing the *Fundamentals of Mathematics* through Scholé Academy will be "restful", we also recognize that there might be a need to provide grades for students. It's a delicate balance to achieve both restful learning and excellent academic performance. Earning a specific grade should not overshadow achievement goals for mastery of this discipline.

The following grades will be assigned 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 will 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 may be a need to complete a transcript with either a numeric or traditional letter grade. Traditional percentage grades will be provided and will be readily accessed on the *Fundamentals of Mathematics* Schoology page. Additionally, Miss Jacobson will provide a transcript of that grade to the requesting parent at the end of the year.

STUDENT EVALUATION: ASSIGNMENTS, TYPES & WEIGHTS

Miss Jacobson will communicate with students regarding assignment feedback and grading through the free online grading system, Schoology.

Student's grades will be comprised of:

1. Assessments: 25% of the grade
2. Class Participation: 25% of the grade
3. Homework: 25% of the grade.
4. Projects: 25% of the grade

STUDENT EVALUATION: ACADEMIC DISHONESTY

Students may be asked to 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 and the use of Math Solver websites or apps is a serious and punishable offense. Such assignments will result in a failing grade.

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 *Fundamentals of Mathematics* Schoology assignment page (access granted after enrollment is secured).

ABOUT THE INSTRUCTOR:

Charity Jacobson seeks to always see God's great design in every aspect of the world around her, particularly in God's glorious creation. The order that math teaches us emphasizes the plan of the Creator. She enjoys finding out how we can use math to improve our every day lives. Whether it is finding mathematical formulas in baking bread, experimenting with genetics in hobby farming, or wondering at the Fibonacci numbers that run through the whole of creation, she is passionate about seeing God's glory throughout the order of creation. She has a Bachelor of Science in Family and Consumer Sciences from The Master's University in Santa Clarita, California, and she is currently working on her Masters degree from the same university. Charity also has experience in small business management as she owns and runs her own business as a sewing machine technician. She thrives as an artist in the kitchen and with textiles. She is involved with teaching and discipling children to love God and serve one another both at home and abroad.