



Fundamentals of Mathematics

Yearlong 2021-2022



ELIGIBLE STUDENTS:

6-7th graders: *This course is designed to help students to complete their transition from elementary mathematics concepts to more advanced mathematics. At the end of the year, students should be prepared to progress into Pre-Algebra and beyond. Students entering the class should have a solid understanding of place value, the four mathematical operations (addition, subtraction, multiplication, and division) of whole numbers, and be familiar with fractions, decimals, methods of expressing data, and basic geometry concepts (angles, shapes, and solid figures).*

Class Dates: classes begin on Tuesday, September 7, 2021; classes end on Friday, May 27, 2022.

Class Times: Mondays, Wednesdays, & Fridays: 11:00 – 12:15 pm (EST)

Mondays, Tuesdays, & Thursdays: 12:30 – 1:45 pm (EST)

Instructor: Miss Rebecca MacPhee

E-mail: rnmacphee@outlook.com

SCHEDULE FOR FUNDAMENTALS OF MATHEMATICS:

CLASS SESSIONS DATES:

Classes will take place on Mondays, Tuesdays, & Thursdays: 12:30 — 1:45 pm (EST) for 32 weeks and 95 classes on the following dates:

September (11): 7, 9, 13, 14, 16, 20, 21, 23, 27, 28, 30

October (12): 4, 5, 7, 11, 12, 14, 18, 19, 21, 25, 26, 28

November (11): 1, 2, 4, 8, 9, 11, 15, 16, 18, [Thanksgiving Break], 29, 30

December (7): 2, 6, 7, 9, 13, 14, 16, [Christmas Break]

January (10): [Christmas Break], 10, 11, 13, 17, 18, 20 [End 1st Semester] 24, 25, 27, 31

February (9): 1, 3, 7, 8, 10, [Winter Break], 21, 22, 24, 28

March (14): 1, 3, 7, 8, 10, 14, 15, 17, 21, 22, 24, 28, 29, 31

April (9): 4, 5, 7, [Holy Week], 18, 19, 21, 25, 26, 28

May (12): 2, 3, 5, 9, 10, 12, 16, 17, 19, 23, 24, 26, [End 2nd Semester]

**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: Number Lines, Factors, Multiples, Squares, and Cubes

Unit 2: Negative Numbers

Unit 3: Multiplication & Division of Fractions and Decimals

Unit 4: Ratio & Rates

Unit 5: Percent

Unit 6: Algebraic Expressions, Equations, & Inequalities

Unit 7: Coordinate Plane

Unit 8: Polygons and Circles

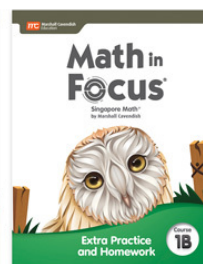
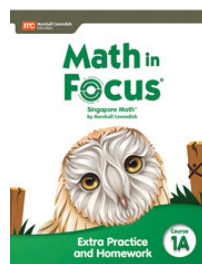
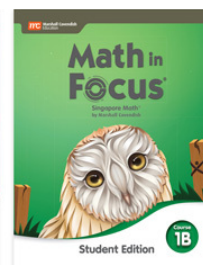
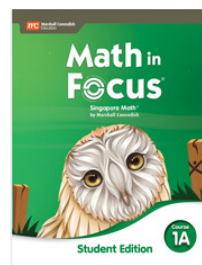
Unit 9: Surface Area & Volume of Solid Figures

Unit 10: Data & Statistics

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

REQUIRED MATERIALS:

- Math in Focus - Student Edition: Course 1, Books A & B (2020 edition)
- Math in Focus - Extra Practice and Homework: Course 1, Books A & B (2020 edition)
- Digital tablet – We recommend Wacom Intuos tablets, but similar products may be used
- Three-ring binder specifically for this course
- Notebook paper and graph paper
- 5 divider tabs
- Binder pencil pouch with sharpened pencils, erasers, ruler, protractor, and drawing compass



FUNDAMENTALS OF MATHEMATICS COURSE DESCRIPTION:

As students are preparing to transition out of grammar school math and into middle school subjects like Pre-Algebra and Algebra, they must gain experience and understanding of increasingly abstract mathematical concepts. In addition to learning more about algebraic expressions, equations, and inequalities, students learn more abstract ideas to extend the arithmetic they have been studying for several years.

Around 6th or 7th grade (ages approximately 11-13), students will be ready to delve into these more abstract mathematical concepts and to flex their problem-solving muscles with these ideas. This course will guide students through a variety of topics, including positive and negative numbers, ratio & percent, algebraic expressions, equations, and inequalities, and finding area and volume of shapes and solids.

My goals for students enrolled in this class are that they will grow in love of the orderly beauty of math, that they will come to appreciate how mathematics expresses God's created world all around us, and that they will gain understanding and confidence in these foundations of math that will carry them forward on their path of learning.

PARENT EXPECTATIONS IN ACTION

The expectations of parents are that they will ensure that their student has all of the required materials needed for the course, a stable internet connection, a distraction-free environment for class sessions, and adequate time to study and complete assigned work outside of class sessions. Parent assistance with assignments is not expected nor required. That being said, some students may be accustomed to having your help with math assignments, and there will likely be a transition period as they build their level of tolerance and confidence in working on math independently. If your student is struggling with an assignment and asks for help, I would encourage parents to honor their student's initiative and provide help. You will have access to the Parental Math Assistance Guide to give you a framework for how best to support and help your student on class assignments.

STUDENT EXPECTATIONS: EXECUTIVE FUNCTION SKILLS

In this class, students will be expected to show development of Executive Function Skills throughout the year. Executive Function Skills are qualities and skill sets that students can develop and hone to better approach the courses, lectures, readings, and teachers they will encounter in their journey as a student.

Students in this class should exhibit the following Executive Function Skills throughout the year.

1. Engagement: The student views class sessions as opportunities to learn and be in fellowship with the instructor and classmates. He is polite and attentive during class sessions, listens actively when others are speaking, and supplies answers, asks questions, and participates in class discussions. The student keeps his video on and stays

focused on viewing the Zoom screen (not distracted by other screens).

2. Self-Control: The student raises his hand during class, speaks when called on to do so (and not out of turn), remains on-task, and shares relevant questions, comments, and ideas. He resists temptations to view other screens or use other devices, play games, work on other schoolwork or activities, or distract the instructor and classmates with disruptive behaviors (e.g., making faces, changing Zoom background/name/settings, making silly comments, etc....).

3. Responsibility: The student completes and submits all assignments by the due date, arrives on time to all class sessions, regularly checks the syllabus and Schoology page for class information and updates, communicates with the instructor promptly with questions and requests for help, and makes use of offered resources. As the student grows in responsibility, our goal would be that he is able to learn and complete assigned work with independence.

4. Initiative: The student thinks about his own learning and discerns whether he understands the lesson or topic. He receives instructor feedback humbly and applies it to future assignments. The student actively communicates with the instructor (and/or parents) to seek help and ask questions if necessary. He strives to take ownership of his own learning.

5. Note-Taking: The student will practice discerning important information, vocabulary, and example problems to write down for future review and study. He will also practice the habit of finishing his notes after a lesson and writing down his own thoughts and questions for later class sessions, independent study, or meetings with the instructor.

STUDENT EXPECTATIONS IN ACTION

The instructor will facilitate learning and will provide plentiful opportunities for practice and growth in our topics of study. That being said, it is ultimately the student's responsibility to be an active learner both in and out of the class sessions. The student must stay up-to-date with assignments and take initiative to ask the instructor and/or parents for help when it is needed.

The student is expected to:

- Arrive on time to class sessions with required materials
- Attend the entire class with his video on
- Listen attentively
- Participate actively in class sessions – This may include presenting problems, sharing methods and strategies for solving problems, reviewing answers, posing questions, explaining and justifying answers, and thinking out loud.
- Embrace mistakes as opportunities to learn
- Seek approved help if struggling with lessons or assignments

- Not to use technology of any kind (including calculators), unless approved by the instructor, to complete assignments
- Complete and submit all assignments by the due date and before the start of class sessions

A student who has not completed assigned work prior to the start of a class session will not be well-prepared to learn or participate in the lesson. If there are extenuating circumstances that prevent the student from completing an assignment, parents should contact the instructor via email prior to the class session to request an extension.

Students will submit their work by scanning their assignment pages and uploading them to the Schoology assignment window. Photographs of completed assignments will not be accepted as they are incredibly difficult to read.

STUDENT EVALUATION: GRADING

Students work alongside the instructor as they learn and grow in their understanding of mathematics, and grades allow the instructor to communicate in a consistent manner with students about their level of mastery. Even more important than a specific grade are the comments and feedback in response to students' methods, solutions, errors, and thought processes on a given assignment. Grades give a reflection of students' levels of mastery, but comments and feedback allow students the opportunity to continue growing in knowledge and skill.

As it is our goal to pursue restful learning in *Mathematics Foundations*, yet also provide clear, consistent messages about the level of a student's mastery, a Mastery Grade Scale will be used to communicate grades for assignments and for the overall course.

The Mastery Grade Scale is as follows:

- Master: a student whose work shows mastery of the material will earn this grade.
- Journeyman: a student whose work shows that he is approaching mastery of the material will earn this grade. This grade is considered satisfactory, but the student will be encouraged to continue working on the knowledge and skills assessed on this assignment.
- Apprentice: a student who needs to spend more time studying and learning the content will earn this grade. The student will be encouraged to re-work the assignment and may be provided with additional practice as needed.

Inasmuch as you might be fully on board with this grading scale 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 upon request. Additionally, Miss MacPhee will provide a transcript of that grade to the requesting parent at the end of the year.

STUDENT EVALUATION: ASSIGNMENTS, TYPES, & WEIGHTS

Miss MacPhee will communicate with students regarding assignment feedback and grading through the learning management system, Schoology.

A student's grades will be comprised of:

1. Classwork & Participation: 30% of the grade
2. Homework & Independent Practice: 30% of the grade
3. Assessments: 40% of the grade

All assignments will be due to the appropriate Schoology assignment folder prior to the start of a given class session. Students should understand that assignments turned in late will earn a 10% penalty for each day the assignment is late. Assignments turned in over one week late may not be corrected or graded.

STUDENT EVALUATION: ACADEMIC DISHONESTY

Students will often complete 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.

Unless otherwise noted, all assignments are to be completed without the use of a calculator. Additionally, plagiarism and the use of Math Solver websites/apps is a serious and punishable offense. Any assignment found to be completed dishonestly 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 (to be sent via email and posted on the Schoology page) that will enable students to join the virtual classroom.

We will also be using the learning management system, Schoology, where students will find course information and assignments, communicate with the instructor, and upload and submit assignments. Students will use scanning technology/apps (like ClearScan) to create single-file PDFs of completed assignments to submit through Schoology.

Finally, we will be using digital tablets (like Wacom Intuos tablets) to allow students to write and draw in response to class activities/problems and share these responses with their instructor and classmates. Students should have a digital tablet during class sessions in order to participate actively and fully in the lessons.

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.

ABOUT THE INSTRUCTOR:

Rebecca MacPhee is an experienced classical educator who has taught at classical schools all around the United States. For the past nine years, she has been a fourth-grade classroom teacher in schools in New Mexico, Georgia, and Virginia. A native of Maryland, Rebecca attended and received her Bachelor of Arts in history at Hood College and additionally completed extensive coursework in education and psychology.

She currently lives in Richmond, Virginia with her pet rabbit, Watson (yes, the reference is to Dr. John Watson). In her leisure time, Rebecca enjoys making any number of things with needles and threads, studying German, reading as much as possible, and visiting her family in Maryland. She is looking forward to illuminating the beauty and wonder of mathematics for Scholé Academy's grammar and middle school students, and to guiding them in their understanding and appreciation of mathematics.