Math 7/8- Berea Middle School

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BEREA MIDDLE SCHOOL MISSION STATEMENT: Berea Middle School will provide an environment that balances love, support and accountability, so that all scholars are empowered to reach their fullest potential.

BEREA MIDDLE SCHOOL VISION STATEMENT: Berea Middle School will be an academic site of distinction, where college and career readiness skills are prioritized and all scholars have opportunities to access real-world activities and experiences.

Course Title: Math 7/8

Textbook Title:

- *South Carolina Middle School Math Solution Course 2* - McGraw Hill Textbook
- *ALEKS* student software
- Reveal software

Course Description:

Accelerated Math 7 is a rigorous and fast-paced course designed for scholars who are ready to tackle both 7th- and 8th-grade mathematics standards within a single school year. This course blends conceptual understanding, procedural fluency, and real-world application to prepare scholars for success in advanced high school mathematics.

Using **Reveal Math**, **ALEKS**, and **McGraw-Hill** resources, scholars will explore topics including:

- **Proportional Relationships & Percent Applications** – understanding ratios, rates, scale factors, and solving multi-step percentage problems.

- **Algebraic Thinking** – writing, analyzing, and solving equations and inequalities; exploring linear expressions and functions.
- **Geometry & Measurement** – studying angles, congruence, similarity, area, surface area, and volume; applying geometric reasoning to problem-solving.
- **Statistics & Probability** – collecting, analyzing, and interpreting data; understanding chance events and making predictions.
- **Number Systems & Exponents** – operating with integers, rational numbers, irrational numbers, and working with scientific notation.

The accelerated pace means scholars will cover a broader range of content in less time, requiring consistent practice, strong problem-solving skills, and active engagement in class. By the end of the course, scholars will be well-prepared to enter **Algebra I** or other advanced mathematics courses in high school with confidence and readiness.

For a complete understanding of the essential knowledge and skills in mathematics, read the SCCCR Mathematics Standards in their entirety; the power standards will be incorporated throughout this course.

Priority Learning Standards for Math 7/8:

Scholars will master the following priority standards, integrating 7th- and 8th-grade expectations to prepare for high school mathematics:

Ratios & Proportional Relationships

- Represent proportional relationships using tables, graphs, equations, and verbal descriptions.
- Determine the constant of proportionality and apply it to solve real-world and mathematical problems.
- Apply proportional reasoning to scale drawings, percent increase/decrease, and tax, discount, and interest problems.

The Number System

- Add, subtract, multiply, and divide integers and rational numbers fluently.
- Apply operations with rational numbers in real-life contexts.
- Extend number sense to irrational numbers and approximate their decimal representations.
- Use and interpret scientific notation to express and compare large and small quantities.

Expressions & Equations

- Generate equivalent expressions using properties of operations.
- Solve multi-step equations and inequalities with variables on one or both sides.
- Understand and analyze relationships between quantities, including direct variation and slope.
- Model linear relationships and functions using equations, graphs, and tables.

Geometry

- Solve problems involving scale drawings and geometric constructions.
- Understand and apply the Triangle Sum Theorem and angle relationships (complementary, supplementary, vertical, adjacent).
- Apply concepts of congruence and similarity using transformations (translations, reflections, rotations, dilations).
- Calculate the area, surface area, and volume of 2D and 3D figures.
- Use the Pythagorean Theorem to determine distances in coordinate and real-world contexts.

Statistics & Probability

- Draw inferences from random samples and compare two populations.
- Describe and analyze data distributions using measures of center and variability.
- Construct and interpret various data displays (box plots, histograms, dot plots).
- Calculate theoretical and experimental probability and use probability models to make predictions.
- Analyze compound events using organized lists, tables, tree diagrams, and simulations.

Course Scope and Sequence (Year-at-a-Glance document)

By the end of the year, scholars will master priority standards from both the 7th- and 8th-grade mathematics curriculum, aligned to Reveal Math, ALEKS, and McGraw-Hill resources.

Quarter 1

Unit: Proportional Relationships

- Analyze and represent proportional relationships in multiple forms (tables, graphs, equations)
- Apply percent concepts to solve real-world problems
- **Standards:** 7.PAFR.1.2, 7.PAFR.1.3, 7.PAFR.2.3

Unit: Solve Problems Involving Percentages

- Solve mathematical and real-world problems involving percentages (markups, discounts, tax, etc.)
- **Standard:** 7.PAFR.1.1

Quarter 2

Unit: Sampling and Statistics

- Create and interpret data displays such as stem-and-leaf plots and histograms
- Use measures of center and spread to describe data sets
- **Standards:** 7.DSPR.1.1, 7.DSPR.1.2, 7.DSPR.1.3, 7.DSPR.1.4

Unit: Solve Problems Involving Operations with Integers and Rational Numbers

- Apply all operations with integers and rational numbers in problem solving
- Solve related equations and expressions
- **Standards:** 7.PAFR.3.5, 7.PAFR.2.4, 7.MGSR.3.1

Quarter 3

Unit: Congruence and Similarity

- Understand congruence and similarity using transformations (translations, rotations, reflections, dilations)
- Solve problems involving geometric properties of shapes
- **Standards:** 8.MGSR.3.1, 8.MGSR.3.3–3.7, 8.MGSR.2.2, 8.MGSR.2.3, 8.MGSR.2.5

Unit: Work with Linear Expressions

- Identify and write equivalent linear expressions
- Factor expressions using greatest common factor
- **Standards:** 7.PAFR.3.2, 7.PAFR.3.3, 7.PAFR.3.4

Unit: Solve Problems Using Equations and Inequalities

- Write and solve multi-step equations and inequalities
- Model real-world situations using expressions and equations
- **Standards:** 7.PAFR.2.1, 7.PAFR.2.2, 8.PAFR.2.1

Quarter 4

Unit: Linear Relationships

- Model and interpret linear relationships and functions
- Understand slope and intercepts in different representations
- **Standards:** 7.PAFR.2.3, 8.PAFR.1.1, 8.PAFR.1.2, 8.PAFR.2.3

Unit: Probability

- Calculate theoretical and experimental probabilities of simple and compound events
- Use probability models to make predictions
- **Standards:** 7.DSPR.2.1, 7.DSPR.2.2, 7.DSPR.2.3, 7.DSPR.2.4

Unit: Angles

- Use triangle angle sum theorem and relationships between angles formed by intersecting lines
- Solve problems involving angle measures
- **Standards:** 7.MGSR.1.4, 7.MGSR.2.1, 7.MGSR.2.3, 7.MGSR.2.4, 8.MGSR.2.1

Unit: Area, Surface Area, and Volume

- Calculate area, surface area, and volume of 2D and 3D figures
- Solve related real-world problems
- **Standards:** 7.MGSR.1.1–1.3, 7.MGSR.1.5, 7.MGSR.1.6, 7.MGSR.2.2, 8.MGSR.1.1

Unit: Irrational Numbers, Exponents, and Scientific Notation

- Convert between forms of rational numbers and extend to irrational numbers
- Apply laws of exponents and scientific notation
- **Standards:** 7.NR.1.1, 7.NR.2.1, 8.NR.1.1, 8.NR.2.1, 8.NR.2.2, 7.PAFR.3.1, 7.PAFR.3.3, 8.PAFR.3.3

Unit: Understand and Analyze Functions

- Define and analyze functions using various representations
- Make predictions based on function behavior
- **Standards:** 8.PAFR.1.2, 8.PAFR.1.3, 8.PAFR.1.4, 8.PAFR.1.6

Materials Needed for Course:

- McGraw Hill Textbook
- ALEKS
- Reveal
- Pencils
- Spiral notebook
- Paper
- Calculator

Classroom Expectations:

While in my classroom, I expect scholars to…

1) Be respectful of everyone in the classroom
2) Clean up after yourself
3) Keep your phone away and powered off
4) Complete all work assigned, on time
5) Follow all school and Greenville County rules
6) Pay attention and ask questions when you need help
7) Stay in your seat unless you ask permission
8) Follow directions

Success in the classroom is greatly affected by the conduct of those in the classroom. The following four rules have been developed to help our scholars be successful.

1. Only behavior that does not interfere with other scholars' right to learn is permitted.
2. Be respectful to your classmates and teachers.
3. Be seated with materials and ready to work when class begins.
4. Food, gum, and drinks (except water) are not allowed in the classrooms or hallways

Grading Policy/Practices:

Minor assignments (9 per quarter): 50%

Major assignments (3 per quarter): 50%

Grading Scale:

A 90-100

B 80-89

C 70-79

D 60-69

F Below 60

Berea Middle School Late Work and Retake Policies:

Make Up Work	Make Up Work Deadlines
In order to receive full credit for make-up work, all work must be submitted within five school days, immediately following the absence. In cases of prolonged illness beyond five days, special consideration will be given. It is the responsibility of the students, not the teachers, to arrange for make-up work. After the five-day deadline, work will be considered late. Please refer to the Late Work Policy below. • Work assigned before the absence or field trip will be due the day the student returns. • Tests assigned before the absence will be taken on the scheduled test date or date arranged with the teacher. • If a student misses a test or quiz while absent, on the first day back, arrangements should be made with the teacher to make up the assessment within five days. • Ideally, work is made up before or after school in order not to miss more class time. Arrangements may also be made with the teacher to make-up assignments during support times. Arrangements should be made with the teacher to complete this in a timely manner. • Students are expected to check teacher websites and Google Classrooms for assignments during any absence	**Assignments must be turned in on or before the following dates: • 1 st Quarter: 10-8-2022 • 2 nd Quarter: 1-6-2023 • 3 rd Quarter: 3-10-2023 • 4 th Quarter: 5-26-2023 • Any work assigned during the last week of the quarter will be accepted through the end of the quarter.**

Late Work Policy	Retake Policy
Greenville County Schools and Berea Middle School is committed to Building a Better Graduate by creating college and career ready students. As such, students must develop character traits that align with workplace expectations. Some examples of these include responsibility, strong work ethic, and self-direction. Students are expected to give their best effort when completing assignments and should strive to complete them by the due date. Students are expected to turn in ALL assignments and should never have a Not Handed In (NHI) recorded in the grade book. Extra opportunities are available for students to make up work through after or before school tutoring, OnTrack Time, and at other times designated by the teacher. Late work will be accepted during the unit of study or within 5 days of the completion of the unit of study. Points will not be deducted for late work.	**Since the goal is for students to master content and skills, students will be allowed to retake/redo major tests only; however, students must commit to doing their part in preparing for the re-test. Students must initiate the request to retake/redo a test within 5 days of receiving the grade on the test. Students are allowed to retake/redo a major test one time. The student must submit a formal email request to the teacher explaining the rationale for the request. The student can cc the parent and grade level administrator as a part of the formal email request, if they choose. Following a re-test, the higher grade will be recorded in the grade book.**