SHORMANN MATHEMATICS

TEACHER GUIDE

PDF

PRE-ALGEBRA

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DIVE

Parents: Course Setup & Login

While the instruction, grading, and Q&A support are provided, a parent or teacher should supervise to ensure the student follows the course instructions and check their written work. Don't worry, you don't need to do any grading or know anything about math! Simply follow these steps:

1. Please watch with your student: Getting Started

2. **CRITICAL**: Read Parent Responsibilities & How to Check Student Work

3. If multiplication facts to 9 have not been memorized, please see: Multiplication Mastery

4. Decide: Hybrid Offline Method for Practice Sets

5. Print and read these Instruction Sheets with your student.

    - Reading Assignment Instruction Sheet
    - Note-Taking Instruction Sheet
    - Practice Set Instruction Sheet
    - Quiz Instruction Sheet
    - Study for Exams Instruction Sheet

6. Read: The Timed Method

7. Required Materials:

    - Select one: Geogebra Geometry App or a Ruler & Drawing Compass
    - Any Scientific Calculator
    - 2-inch binder and 3-hole paper (blank or college-ruled) for lectures, corrections and practice sets OR a spiral notebook for lectures and corrections, and plain copy paper for practice sets
    - Small spiral notebook (4x6) for formulas
    - Computer or tablet with Internet access and headphones or speakers

8. To ensure your device is setup for our eLearning system, please follow the: Computer & Device Setup Instructions

9. After you receive the login email, follow the steps under **PARENTS** to continue setting up the course. To find out when your login email will be sent, see: eCampus

10. There is no separate parent login. Parents use the same login the student uses. Learn More.

Teacher Guide

Table of Contents

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Shormann Math combines tried and true teaching methods with 21st Century technology. It is a user-friendly course with video lectures, interactive homework, automated grading, grade recording, step-by-step solutions on video solutions ,and Q&A email support.

My primary goal is to teach students how math connects to their world and their Creator. I do this by teaching math as the language of science and a tool for understanding God and the world He created. In so doing, I pray that our courses will strengthen the student's relationship with Christ in ways that will help them be productive members of society who seek to glorify God in all they do!

Important Resources

Grade Changes and Resets

Contact Tech Support

Transcripts & Credits

Contact a Consultant

Ask Dr. Shormann

NCAA

Comparison to Saxon 8/7

Official Course Descriptions

Prerequisite

Regardless of what curriculum your student previously used, if they are a good math student in 7th Grade or higher AND they have memorized multiplication tables to 9, they should be ready for Shormann Pre-Algebra. Please take this Placement Test to confirm: Placement Test for Pre-Algebra

Credits:

1 Pre-Algebra Credit

Official Course Description

Shormann Pre-Algebra is a 21st Century course that teaches all the concepts required to build a firm foundation for upper level mathematics courses. Reviewing arithmetic calculation, measurements, geometry and other skills, this course introduces pre-algebra, square roots, ratios, prime and composite numbers, probability and statistics. Students learn adding/subtracting/multiplying fractions, equivalent fractions, the metric system, repeating decimals, scientific notation, Pi, graphing inequalities, multiplying algebraic terms, the Pythagorean Theorem, the slope-intercept form of linear equations, discrete mathematics, and more. See the full Scope & Sequence

Honors or Standard Course Options

Shormann Pre-Algebra teaches all the topics required for an honors level course (Scope & Sequence). Students who complete the course in a typical school year or less, and use the Honors Grade Scale, can list it as an honors course on their transcript. It is also easily modified for use as a standard course by using the Standard Grade Scale. Our unique teaching methods of incremental bite-sized lessons and continual review, along with the Timed Method and state-of-the-art eLearning tools like instant feedback and Help links, make learning math faster and easier! Therefore, Shormann Pre-Algebra is for everyone!

Learn More: Credits & Transcripts Honors Course Descriptions

Honors Grade Scale	Standard Grade Scale
A – 93-100	A – 90 -100
B –84 – 92	B –80 – 89
C – 74 – 83	C – 70 – 79
D – 65 – 73	D – 60 – 69
F – 64 or below	F – 59 or below
I – Incomplete	I – Incomplete

Using Shormann Math in a Classroom or Co-op

- Shormann Math for Schools
- How to use Shormann Math in a Co-op

Standardized Test Prep

While *Shormann Pre-Algebra* helps students use math to become more creative like their Creator, glorifying Him and serving others, it also provides excellent preparation for all standardized tests, like the Stanford Achievement Test and other end of year exams.

This course does not teach specific topics on the PSAT, SAT, and ACT. It lays a firm foundation that prepares students to learn those topics in Shormann Algebra 1 and 2. By the time a student finishes *Shormann* Algebra 1 and 2, they will have covered all the math concepts presented on the redesigned PSAT and SAT, as well as the ACT, CLEP College Algebra and CLEP College Math exams! **The Math section of the PSAT & SAT contributes 50% of the total score!**

Parent Responsibilities

While the eLearning course provides all the instruction and grading, it is the parent's responsibility to check their student's work to ensure the student is using the course as directed and to supervise students during the 4 exams. Please follow these steps after each lesson is completed: How to Check Student Work

Optional: Hybrid Offline Method for Practice Sets

Students use the PDF of the textbook to complete the Practice Sets on paper, then login to the eLearning system to enter their answers for grading and grade recording. For details, see: Hybrid Offline Method

Scheduling

Shormann Pre-Algebra is set up on a 36 week schedule.

Timed Method: Frustration-Free Math

Working beyond the brain's developmental ability to retain and process new information has the same effect as skipping the material. This leads to "careless" mistakes, frustration, and gaps in understanding.

Before starting math each day, set a timer for one hour. At the end of this time, regardless of how much of the lesson is completed, stop and have them pick-up where they left off the next day.

This allows the student to learn at their own pace, giving them extra time, when needed, to grasp a new concept or relearn forgotten concepts by rewatching video lessons, studying the help links, etc. When a student is **required** to complete a lesson per day, they quickly realize that going back and relearning forgotten concepts can make the lesson last longer and they will likely skip this critical step. I cannot overemphasize the importance of relearning in the process of developing fluency (speed and accuracy). As fluency develops, the student will complete more and more of the lesson each day. Learn More: How will they finish on time?

Don't Expect Immediate Mastery

I strongly discourage incorporating "immediate mastery" methods into Shormann Math. For example, some parents and teachers will not let the student progress to the next lesson unless they have completely mastered the current lesson. This can cause discouragement and exasperation.

Just like in sports or music, it takes time to learn a skill. Most students need to practice a skill over several days before mastery is achieved. That's why the Practice Sets review previous concepts over a long period of time. So, please use the system like it was designed, and give your student time to patiently practice and build their skills!

Focus on Fluency

Fluency means speed and accuracy. The only way to develop fluency is by practicing the skill correctly over a long period of time. Think of a baseball pitcher or a concert pianist. How many times do they practice the same pitch or piece? How many times do they do it wrong while they are learning? Don't be surprised when your child gets the same problem wrong multiple times while they are learning. The key is to relearn the concept and try again.

Conversely, giving the solution before relearning will erode mastery. So instead of “helping” or letting the student see the answer, encourage students to relearn by using the links above each Practice Set question. There is a link to a similar example problem and a link to the video lecture that teaches that concept. Then, after all the questions have been attempted and the assignment is submitted, use the solutions to relearn the missed concepts. In the beginning, this process may be slow and laborious. Be patient, use the timed method, and eventually math will be faster and easier.

Course Components

I. **Lessons:** A daily lesson consists of 4 parts:
   - Read Rules and Definitions: Instruction Sheet
   - Watch Video Lecture and Take Notes: Instructions for Lectures
   - Practice Set:
     - Hybrid Offline Instructions
     - Practice Set Instructions
   - Facts Practice Drills

II. **Quizzes:** Quiz Instruction Sheet

III. **Quarterly Exams:** Quarterly Exams Instruction Sheet

IV. **eTextbook:** A printable PDF of the complete textbook with the full lesson and practice sets. It is linked on the Course Home page under "Resources". A hard copy can be purchased here: Textbook

V. **Solutions Manual for Practice Sets:** To prevent student access, this is available by sending an email from the parent email address to support@diveintomath.com with the student's username and course title.

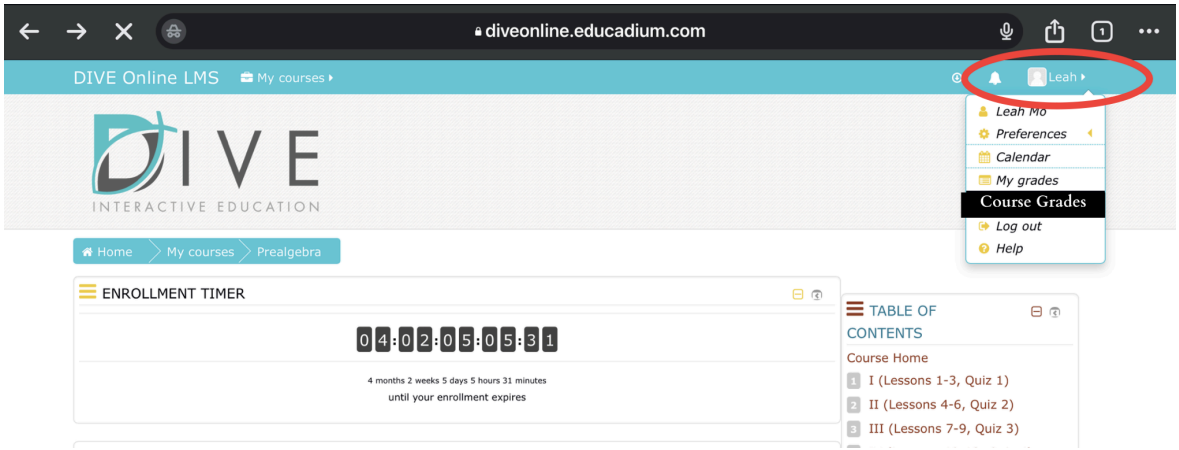
Optional Resources for Purchase:

- **Family Grading Subscription:** Allows parents to login to one account to view all of their children's grades and allows them to change grades and reset assignments for all of their students. Learn More
- **Hard Copy of the eTextbook**
- **Hard Copy of the ePractice Set Booklet**

Online Grade Book & Grading

Note: If your student has a learning disability or you are not using the course as instructed (skipping assignments, giving more time on exams, etc.), also see the Learning Disabilities section below.

1. Login using the same login as the student, select “My Courses” in the top menu, then select the course title.
2. In the top right corner, select the student’s name, then “Course Grades”.



3. The grade book will open.

Grade Book: Joe Smith

Your Student's Grades — *Average Grade of All Students in this Course*

Assignments	Grade	Percentage	Class Average
Grading Shormann Prealgebra			
Lesson 1 Practice Set	90.00	90.00 %	86.95
Lesson 2 Practice Set	85.00	85.00 %	84.59
Lesson 3 Practice Set	95.00	95.00 %	91.60
Quiz 1(Lessons 1-3)	10.00	100.00 %	9.71
Lesson 4 Practice Set	90.00	90.00 %	93.36
Lesson 5 Practice Set	97.50	97.50 %	94.04
Lesson 6 Practice Set	92.50	92.50 %	91.64
Quiz 2(Lessons 4-6)			

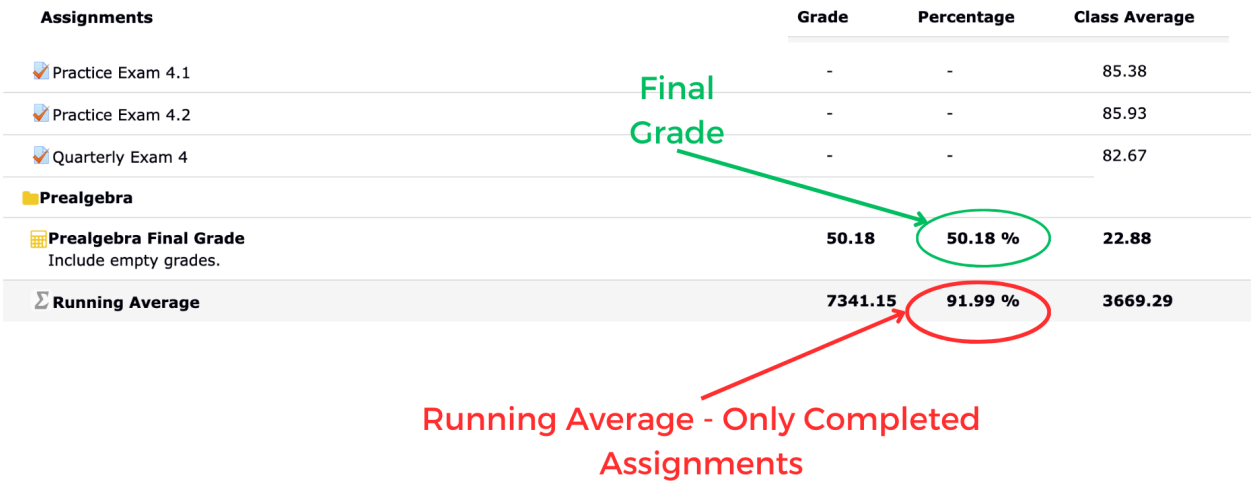
Grade: This is your student's grade in points.

Percentage: This is your student's grade as a percentage.

Class Average: This is **NOT** your student's grade. It's the average grade of ALL the students who have taken this assignment.

Running Average:

Scroll down to the bottom of the grade book and find the Running Average. This is the grade for all the assignments that have been completed so far. It does not include the zero for assignments that have not been completed. So, as long as the student has not skipped any assignments, this is where you would see the student's current grade based on the assignments they have completed.



Final Grade:

This is the grade used at the end of the course for the final grade. It includes the zeros for assignments that were not completed. In this example, only a few of the assignments have been completed so the final grade is very low. At the end of the course, if all assignments are completed, the Final Grade and Running Average are the same. If they are not, see the "Issues" below.

Add Extra Credit to the Final Grade

For details, see "Optional Extra Credit" below.

Transcripts & Credits

For a free transcript template and detailed instructions, see Transcripts & Credits

ISSUES WITH THE GRADE BOOK

Issue 1: Final Grade and Running Average Are Not the Same

This means one or more assignments were not completed. Scroll through the grade book and look for assignments in the "Percentage" column that don't have a grade. See the next section to resolve this issue.

Issue 2: No Grade in the Percentage Column

1. Select the title of the assignment in the Grade Book.
2. If there is a button that says "Continue Last Attempt", this means the student opened and/or started the assignment but did click Submit All & Finish. Select the "Continue Last Attempt" button, "Finish Attempt" then, "Submit All & Finish".
3. If there is a "Start Quiz" button, this means the student did not start the assignment. You can either leave it as a 0 or have the student do the assignment, which will raise the final grade.

Grade Weights

The following describes how the grades are “weighted”.

Facts Practice (Drills) = 5%
Practice Sets & Practice Exam: 25%
Weekly Quizzes: 30%
Quarterly Exams: 40%

Optional: Add Extra Credit

Keep in mind, as the parent and/or teacher, you are responsible for assigning grades. Our grade book is a tool to help you. You are not required to use the grades in the eLearning grade book or follow any of our recommendations. Use the course like you would any other textbook based curriculum, like Abeka or Bob Jones.

We don’t recommend adding extra credit for correcting missed Practice Set problems as they have already had 2 attempts with a hint at each question where they can earn partial credit. For example, if they solve the problem on paper then, enter their answer and it is wrong, they get a hint that tells them the first step of the solution. They can also use the help links above each

question to re-learn the concept, correct their work, then enter their answer again. If they get it right the second time, they get 1/2 credit for that answer. Because Practice Sets are just practice, they are a smaller percentage of the overall grade. Therefore, adding extra credit is like giving double extra credit. However, if you would still like to give extra credit, here are some options:

Option 1: Add up to 3 points to the Final Grade in the Grade Book. (The final grade should not be more than 100.)

Option 2: Use the "Simplified Grading Method" below.

This extra credit cannot be added to the grade book. Simply add the points to your student's final grade, then put the new grade on the Certificate of Completion (see below).

Certificate of Completion

Upon course completion, a certificate of achievement can be printed. Go to the Course Home page, scroll down the left menu, then click ***Certificate***. There are detailed instructions on how to save, edit, and print the certificate.

Learning Disabilities: How to Modify the Timed Quizzes and Exams

While we cannot change the timer on the exams or quizzes, you can give the student more time by following these steps. We also have a new Family Grading Subscription that allows parents to change grades and reset assignments for all of their students.

Quizzes: How to Modify the Time

Parent Supervision Required: After the first attempt, the Results Page with all the answers is displayed. Quizzes have a 20 minute time limit and four questions. To double the time to 40 minutes, follow these steps:

1. The student should study using the Study Instructions just above the link to the quiz.

2. Have the student take the quiz twice. In the first attempt, complete only the first two questions. In the second attempt, complete the last two questions.
3. Add the scores of each attempt. Then, do one of the following:
    i. Use the “Simplified Grade Recording Method” below.
    ii. Use the new Family Grading subscription that allows parents to change grades and reset assignments. See: **Family Grading**
    iii. Use the "Request Grade Change & Resets” form to request a grade change.
4. **Critical:** Have the student correct missed problems by following the steps on the “Quiz Instruction Sheet”, linked above the quiz.

Exams: How to Modify the Time

Parent Supervision Required: The exams are limited to one hour. This method doubles the time to two hours.

1. Study using the Study Instructions linked just above the exam.
2. Have the student take the exam twice. In the first attempt, complete only the first half of the exam. In the second attempt, complete the second half. This gives the student 2 hours to complete the exam.
3. Add the two scores together.
4. Have the student correct all missed problems on paper.
5. Optional: If you want to compensate for the fact that students normally get two full attempts and the grades are averaged, you can do the following: If they correct all missed problems, add 100 points to their grade and divide by two. So if they made a 40 on attempt 1 and 45 on attempt 2, their grade would be 85+100 divided by 2 = 92.5.
6. For grade recording you can do one of the following:
    a. Use the “Simplified Grade Recording Method” below.
    b. Use the new Family Grading subscription that allows parents to change grades and reset assignments. See: **Family Grading**
    c. Use the "Request Grade Change & Resets” form to request a grade change.

Grading for Learning Challenged Students

Because students with learning challenges often require many accommodations, grade changes, and resets, we offer two options to simplify grade recording:

i. Use the "Request Grade Change & Resets” form to request a grade change.

ii. Instead of submitting multiple grade change requests:
    - Use the “Simplified Grade Recording Method” below.
    - Use the new Family Grading subscription that allows parents to change grades and reset assignments. See: **Family Grading**.

Simplified Grading Method

If you allow your student to skip assignments, modify the time for learning disabilities, etc, the online grade book will not accurately calculate a final grade. Instead, you can either use the Family Grading Subscription or use this simple method to give a completion grade of 90 for all Facts Practices, Quizzes, Practice Sets, and Exams. This way, you don't need to submit multiple grade change requests or manually record all the scores. All you need to record are the four exam grades. Then, use the formula below. This new grade can be added to the Certificate**.**

> **Exam Average:** Add the exam grades and divide by 4.
> **Final Grade** = **Exam Average (.40) + 54**
> **For Example:** If the exam average is a 70, it would be: 70 (.40) + 54 = 82

To use a different completion grade for the Practice Sets, Quizzes and Facts Practices, use this formula: Final Grade = Exam Average (.40) + Completion Grade (.60)

To calculate an exact score manually, record all the grades, then use this formula:

> Exam Avg. (.40) + Quiz Avg. (.30) + Practice Set Avg. (.25) + Facts Practice Avg. (.05)

You can also request a grade change for each assignment by using the "Request A Grade Change Form" on the Course Home page.

Results of Former Students

Why do results matter?

Shormann Math builds on a solid foundation of time-tested teaching methods, including the incremental development + continual review format pioneered by John Saxon(1923-1996). And not just Saxon's teaching methods, but his teaching thoughts as well, including his thought that "Results, not methodology, should be the basis of curriculum decisions."

One of the primary reasons John Saxon developed his math curriculum in the 1980s was because new ways of teaching math were not working. Math "educrats" at the time were promoting their untested "visions" of math teaching. But with 3 engineering degrees, John was a math user before he became a math teacher. Not only that, he was a test pilot. If anyone knew the extreme value and importance of testing a new product, it was John!

Results matter because they reveal whether or not a new product really works. And while statistics certainly don't reveal everything about a new product, they can certainly reveal many things. **Most math curricula don't provide this level of detail on student performance.** We are pleased to provide it for you.

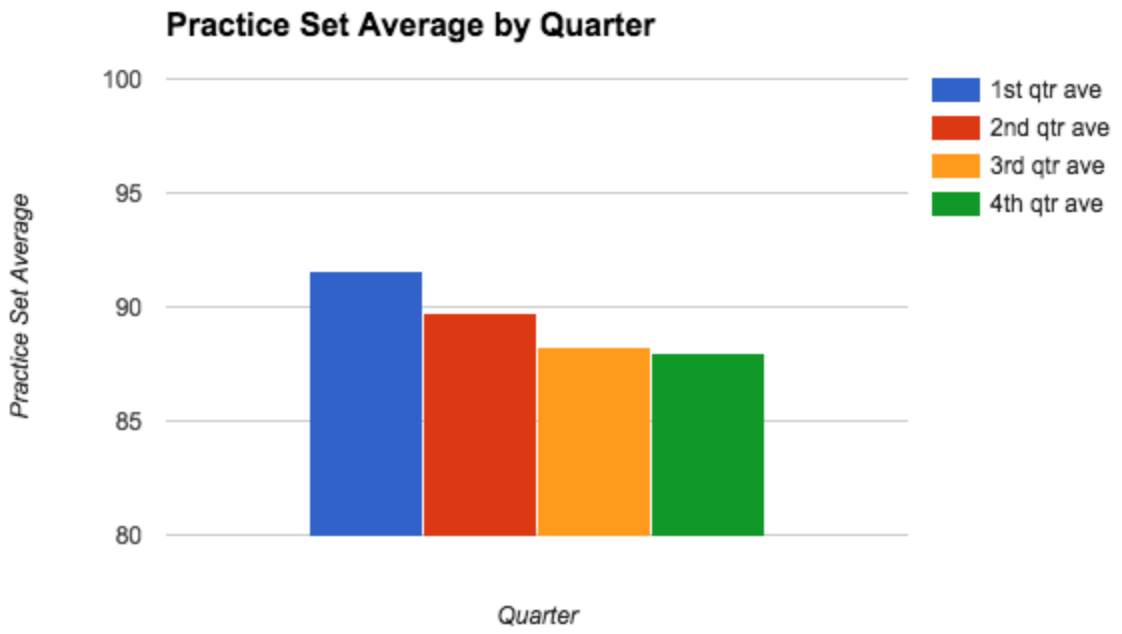
Overall performance

Overall Average	**90.3%**
Range(lowest to highest)	**81.0-97.9%**
% Students making an A(90%+)	**67%**

Discussion: The average student in our beta test made an A in the class! Because each new Shormann Math course is beta-tested in a live online class setting, Dr. Shormann gets to know the students on more than just a "numbers only" basis. And we all know that God doesn't make clones, so the fact that not every student performed the same should

not be a surprise. Natural talent definitely matters, but so do things like attitude and maturity. Dr. Shormann spends time during the video lectures encouraging students to develop fruits like patience and self-control (Galatians 5:22-23), as well as persevering with joy (James 1:2-3), and gratefulness (I Thessalonians 5:18).

Practice Sets

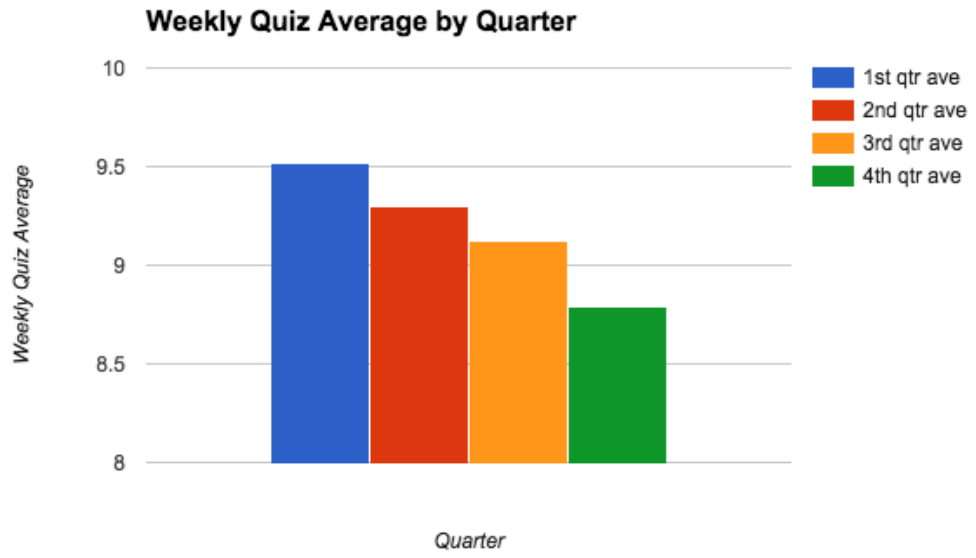


Discussion: You've probably never seen statistics on student performance in a math class before, which is why it is important to discuss the data! The decreasing trend over time is exactly what we expected. Two big factors are responsible for the trend: 1) There's more review of previously-learned concepts at the beginning, so it's easier and 2) student effort tends to decrease the closer you get to the end of the year!

What we had hoped for was a Practice Set average above 85%, and that was achieved in all 4 quarters! 85% is a good cutoff for determining whether students are understanding, and retaining most of the concepts learned.

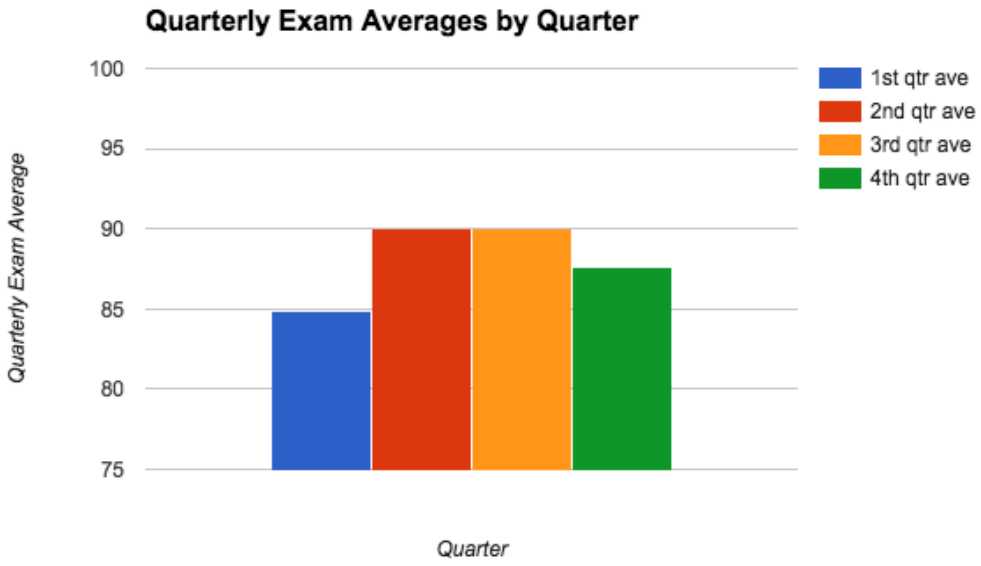
Note also the high first quarter average. Because Shormann Math is built on John Saxon's method of integrating geometry and algebra, students using Shormann Prealgebra, Saxon Math 8/7 or Saxon Algebra ½ will be most comfortable starting Shormann Math. However, not all beta-test students used Saxon previously, so the high first quarter average is a good indication that students who successfully completed any pre-algebra course should do just fine in Shormann Math.

Weekly Quizzes



Discussion: Weekly Quizzes show a similar trend to the Practice Sets, challenging the students more as the year progressed. A score of 8 out of 10 or higher is a good indication of whether students understood the lessons covered that week. We are pleased that scores were well above this in all four quarters!

Quarterly Exams



Discussion: Notice the Quarterly Exams do not follow the same trend as Practice Sets or Weekly Quizzes, with Quarter 1 having the lowest average. And this is where beta-testing a new product is so valuable. We realized that we were asking a lot for 9th-grade level students, most of which had never taken a cumulative exam like this. The solution? Practice exams! Just like when learning a sport, a musical instrument, etc., good practice results in good performance. The beta-test students clearly performed best on first quarter Practice Sets and Quizzes. Most likely, if they were given practice exams prior to their quarterly exam 1, this would have been their highest exam average. Now, all quarterly exams have two practice exams that students use to study for their actual exam.

85%+ is an indicator of good retention and understanding of concepts covered in a quarter. For all 4 quarters, student averages were at, or well above 85%. Because of Shormann Math's format of continual review, we are basically asking students to be responsible for "all their math, all the time." These results show that, on average, students are responding very well!

Scope & Sequence

Shormann Pre-Algebra

To jump to the Course Sequence: Course Sequence

What is Mathematics?
Comparing abstract and concrete
Describing mathematics as “the language of science”
Using the Bible to understand mathematics
God’s attribute of unity and diversity, and connection to mathematics
Discuss math history and founders of modern mathematics
Numbers and Operations
Numeration
Digits
Reading and writing numbers
Ordinal Numbers
Place value
Number line
Expanded notation
Operations
Addition
Addends and sum
Adding whole numbers
Regrouping
Adding decimals
Adding fractions and mixed numbers
Adding signed numbers
Subtraction
Difference, subtrahend, and minuend

Subtracting whole numbers
Regrouping (borrowing)
Subtracting decimals
Subtracting fractions and mixed numbers
Subtracting signed numbers
Mental subtraction strategies
Multiplication
Multiplication as repeated addition
Factors and product
Multiplication table
Regrouping
Multiplication notations: a x b, a · b, and a(b)
Multiplying whole numbers
Multiplying decimals
Multiplying fractions and mixed numbers
Multiplying signed numbers
Mental multiplication strategies
Using “Invisible ones” as factors
Division
Dividend, divisor, and quotient
Dividing with whole numbers
Remainders
Dividing with decimals
Dividing with fractions and mixed numbers
Dividing with signed numbers
Mental division strategies
Division notations: division box, division sign, and division bar
Using “Invisible ones” in the denominator to create a fraction
Powers
Powers as repeated multiplication

Base and exponent
Powers of whole numbers
Powers of decimals
Powers of fractions
Negative exponents
Scientific notation
Relationship of place value to powers of 10
Using “Invisible ones” as exponents
Roots
Square roots
Cube roots
Index
Using a calculator to find roots
Mastering basic facts
Order of operations
Inverse operations
Fraction Concepts
Fractions and Mixed Numbers
Reading and writing fractions and mixed numbers
Numerator and denominator
Fractional part of a whole, group, set, or number
Comparing and ordering fractions
Equivalent fractions
Reducing
Improper fractions
Least common denominator
Converting fractions to decimals and percents
Reciprocals
Complex fractions
Decimals

Reading and writing decimals
Comparing and ordering decimals
Converting decimals to fractions and percents
Percents
Reading and writing percents
Identify/find percent of a whole, group, set, or number
Converting percents to fractions and decimals
Percents greater than 100%
Percent of change
Other Fraction Concepts
Ratios and proportions
Rates
Estimation
Rounding whole numbers
Rounding decimals
Rounding mixed numbers
Estimating sums
Estimating differences
Estimating products
Estimating quotients
Estimating roots
Using estimation to verify reasonableness of calculations
Number Theory
Fact families
Even and odd
Factors, multiples, and divisibility
Prime and composite numbers
Greatest common factor (GCF)
Least common multiple (LCM)
Divisibility tests

Prime factorization
Infinity
Infinitesimals
Number Sets and Number Systems
Counting numbers (natural numbers)
Whole numbers
Decimal number system
Negative numbers
Integers
Rational numbers
Irrational numbers
Real numbers
Roman numerals
Base 2
Measurement
Units
U.S. Customary
Length (inch, foot, yard, mile)
Capacity (cup, pint, quart, gallon)
Weight (ounce, pound, ton)
Metric
Prefixes (milli-, centi-, deci-, deka-, hecto-, kilo-)
Length (meter)
Capacity (liter)
Mass (kilogram)
Temperature
Fahrenheit scale
Celsius scale
Time

Seconds, minutes, and hours
Time Value of Money
Interest rate, savings and debt
Simple interest
What the Bible says about savings and debt
Other Measurement Concepts
Square units
Cubic units
Degrees of arc
Magnetic compass heading
Standard abbreviations
Nonstandard units
Unit Conversion
Conversion in the U.S. Customary System
Conversion in the metric system
Conversion between systems
Simplifying mixed measures
Unit multipliers
Conversion between temperature scales
Using rate as a conversion factor
Currency (money) exchange rates
Measuring
Length
Angles
Benchmarks for measurements
Measurement activities
Estimating activities
Selecting appropriate units
Using metric scales to reinforce decimal concepts
Determining whether measures are reasonable

Determining the precision of a measuring tool
Indirect Measure
Scale factor
Using similar triangles
Transversals and proportions
Scale drawings (two-dimensional)
Tools
Ruler (U.S. Customary and metric)
Protractor
Compass (drawing)
Compass (magnetic)
Thermometer
What the Bible says about correct use of measurement tools
The idea that mathematics is a God-given tool for us to use
Geometry
Basic Terms
Points
Segments
Rays
Lines
Angles
Planes
Lines
Parallel, perpendicular, and intersecting
Horizontal, vertical, and oblique
Slope
Angles
Acute, obtuse, right, and straight
Complementary and supplementary

Angles formed by transversals
Calculate to find unknown angle measures
Angle bisectors
Vertical
Adjacent angles
Polygons
Describing and classifying
Drawing
Sides and vertices
Perimeter
Area
Regular
Similarity and congruence
Complex figures
Interior and exterior angles
Sum of angle measures
Diagonals
Triangles
Perimeter and area
Acute, obtuse, and right
Equilateral, isosceles, and scalene
Proportional triangles
Pythagorean theorem
Quadrilaterals
Squares
Rectangles
Circles
Center
Radius and diameter
Circumference

Pi
Area
Arcs
Solids
Describing and classifying
Faces, edges, and vertices
Drawing
Volume
Surface area
Polyhedrons
Nets (maps)
Perimeter
Polygons
Circles
Complex figures
Area
Triangles
Rectangles
Parallelograms
Trapezoids
Circles
Semicircles and sectors
Complex figures
Volume
Prisms
Cylinders
Pyramids
Cones
Spheres
Estimating volume

Coordinate Geometry
Naming and graphing ordered pairs
Origin
Intercepts of a line
Slope of a line
Creating straight-line drawings
Solving a system of linear equations
Patterns
Defining mathematics as a God-given tool for measuring pattern and shape
Constructions
Circles
Congruent segments
Congruent angles
Angle bisectors
Perpendicular bisectors
Using technology (geometry apps) to do constructions
Transformational Geometry
Rotation
Reflection
Translation
Graphing transformations on the coordinate plane
Geometry in Art
Vanishing point
One-point perspective
Divine proportion
Euclidean Geometry
Euclid and foundations of modern geometry
Axioms
Postulates

Deductive reasoning and Logic
Aristotle and foundations of logic
Comparing inductive and deductive reasoning
Proof
Converse/inverse/contrapositive
Syllogism
Comparing logic and truth
Trigonometry
Basic trigonometry ratios (sine, cosine, tangent)
Connection of trigonometry to right triangles
Connection of trigonometry to proportion
hypotenuse
Using trigonometry buttons on a calculator
Trigonometry applications (measure height)
Algebra
Patterns
Numeric patterns
Geometric patterns
Story-problem patterns
Sequences and Series
Terms
Arithmetic sequences
Geometric sequences
Relationship between sequences and series
Arithmetic series
Geometric series
Sums
Summation Notation
Working with Sums

Integers
Adding and subtracting integers/signed numbers
Multiplying and dividing integers/signed numbers
Absolute value
Algebraic Concepts and Procedures
Variables
Symbols of inclusion
Evaluating
Substitution
Constants
Coefficients
Polynomials
Simplifying
Factoring
Combining like terms
Equations
Solving for an unknown
Solving multi-step equations
Writing an equation for a given word problem
Writing a word problem for a given equation
Transforming equations (using the addition rule and the multiplication rule)
“= means equal,” x=a and a=x are the same
Nonlinear equations
Solving simple quadratic equations
Literal equations
Creating and solving a system of equations
Inequalities
Solving
Graphing on a number line
Graphing on a coordinate plane

Functions
Formulas
Input-output tables
Function rules
Graphs
Linear functions
Creating a linear function to solve a problem
Nonlinear functions
Connecting symbolic forms to their graphical shapes
Analyzing functional relationships
Rates
Comparing functions and relations
Properties
Associative property of addition
Commutative property of addition
Associative property of multiplication
Commutative property of multiplication
Identity property of multiplication
Distributive property
Zero property of multiplication
Graphing
Number line
Coordinate plane
Origin
Quadrants
Graphing points
Graphing lines
Graphing parabolas
Graphing hyperbolas
Graphing absolute value functions

Graphing square root functions
Graphing cubic functions
Graphing exponential functions
Graphing inequalities
Slope-intercept form
Writing linear equations from graphs
Writing linear inequalities from graphs
Writing and graphing vertical and horizontal lines
Statistics, Data Analysis, and Probability
Statistics and Data Analysis
Organizing and Analyzing Data
Tables
Frequency tables
Average
Mean, median, mode, and range
Selecting the best measure of central tendency for a given situation
Identifying misleading graphs
Making predictions based on statistics
Linear regression and best fit
Representing Data
Legend (key)
Bar graph
Comparative bar graphs (double-bar graphs)
Histograms
Line graphs
Double-line graphs
Circle graphs (pie graphs)
Pictographs
Venn diagrams

Coordinate planes
Scatterplots and estimating rate of change
Probability
Notations for expressing probability
Theoretical Probability
Simple probability
Chance
Odds
Outcomes
Independent events
Dependent events
Experimental Probability
Performing probability experiments
Accuracy of predictions as affected by number of trials
Compound experiments
Experiment tables
Computer Mathematics Basics
Connection to binary numbers (base 2)
Pixels
Matrices
Connection of computers to idea of continuity and discreteness
Computer memory calculations
Sequences and Series
Sums
Introductory Calculus (Prealgebra level)
Limits
Understanding Limits
Connecting limits and infinitesimals
Limits of discontinuous functions

Derivatives
Derivative means slope of a line
Notation for derivatives
Connecting derivatives and limits
Derivatives and tangent lines
Calculus and the study of speed (rate of change)
Integrals
Integrals and counting squares on a graph
Connecting integrals and infinitesimals
Problem-Solving Strategies
Break a problem into simpler parts
Act out the problem
Use logical reasoning
Draw a diagram
Draw a picture
Find a pattern
Work backward
Make a chart, graph, or list
Guess and check (trial and error)
Making an educated guess (hypothesis)
Distinguish between relevant and irrelevant information
Find missing information
Extend patterns
Apply solution strategies for simple problems to complex problems
Use an algorithm
Importance of using your imagination in problem solving
Importance of “invisible ones” in problem solving

Course Sequence

Shormann Pre-Algebra

1	Welcome!; What is mathematics?
2	A Brief History of Mathematics
3	Thinking about Number; Origin of Modern Numerals and Arithmetic Symbols
	Week 1 Quiz
4	Place Value and Expanded Notation; Reading and Writing Whole Numbers
5	Types of Numbers; Number Lines; Sequences
6	Arithmetic with Whole Numbers and Money; Subtraction with Negative Results
	Week 2 Quiz
7	Adding and Subtracting Fractions with Common Denominators; Multiplication with Fractions and Reciprocals
8	Properties of Arithmetic Operations; Evaluating Expressions
9	Arithmetic with Missing Numbers
	Week 3 Quiz
10	Factors and Divisibility; Prime and Composite Numbers
11	Fractions and Percents
12	Points, Lines, Rays and Angles; Measuring Angles with a Protractor
	Week 4 Quiz
13	Addition and Subtraction with Decimal Numbers; Rounding to the Nearest Whole Number
14	Equivalent Fractions and Reducing; Improper Fractions; Addition with Mixed Numbers and Regrouping
15	Measuring with Inch and Metric Rulers; Subtraction with Mixed Numbers and Regrouping
	Week 5 Quiz
16	Story Problems About Addition and Subtraction

17	Least Common Multiples; Equivalent Division Problems; Distributive Property of Multiplication
18	Multiplication and Division with Decimal Numbers; Reading and Writing Decimal Numbers
	Week 6 Quiz
19	Multiplication with Mixed Numbers, Including Exponents; Story Problems About Differences
20	Adding and Subtracting Fractions with Different Denominators
21	Reducing Fractions Using Prime Factorization; Least Common Multiples and Prime Factorization; Multiplying and Dividing Signed Numbers
	Week 7 Quiz
22	Order of Operations; Simplifying Exponents
23	Dividing Fractions; Division by Zero and by Infinitesimals
24	Division and Writing Answers as Mixed Numbers and Decimals; Dividing by Decimal Numbers
25	U.S. and Metric Length Conversions
	Week 8 Quiz
	Exam 1
26	Operations with Signed Numbers; Graphing Inequalities on a Number Line
27	Absolute Value; Story Problems About Equal Groups
28	The History of Ratio; Story Problems About Parts of a Whole; Two Part Story Problems
	Week 10 Quiz
29	Rational and Irrational Numbers; Number Sets and Number Lines; Prime Factorization and Addition/Subtraction
30	Working with Square Roots; Prime Factorization and Perfect Squares
31	More Operations with Fractions and Decimals; Repeating Decimals
	Week 11 Quiz
32	Fraction/Decimal/Percent Equivalents

33	Fraction of a Whole Story Problems; Fraction/Decimal Part of a Number Story Problems, Part I of II
34	Average, Part I of II
	Week 12 Quiz
35	Rate; Working with Sales Tax
36	What is Algebra?; More Complex Evaluations; Invisible Ones
37	Similarity and Scaling; Rate as a Conversion Factor
	Week 13 Quiz
38	Unit Conversions: Capacity (Volume)
39	Simplifying Algebraic Expressions; Solving Basic Algebra Equations
40	Algebraic Subtraction
	Week 14 Quiz
41	Algebraic Word Problems
42	Perimeter
43	Simplifying Algebraic Expressions: Adding Like Terms
	Week 15 Quiz
44	Euclid; Classifying Triangles
45	Probability: Simple Events
46	Simplifying Algebraic Expressions: Multiplying; Expanding
	Week 16 Quiz
47	Inductive Reasoning; Construction; Estimating Magnetic Compass Headings
48	Simplifying Algebraic Expressions: Factoring
49	Finding Missing Angles
50	Unit Conversions: Temperatures and Exchange Rates
	Week 17 Quiz
	Exam 2

51	The Coordinate Plane
52	More Decimal and Fraction Story Problems (Part II of III)
53	Comparing Similarity and Congruence; Similar Triangles; Polygons
	Week 19 Quiz
54	Product of Square Roots Rule; Pythagorean Theorem
55	Deductive Reasoning and Proofs; Average, Part II(Average Given)
56	More on Finding Missing Angles, Including Transversals; Transversals and Proportions
	Week 20 Quiz
57	Solids and Nets; Power Rule for Exponents
58	Foundations of Analytical Geometry; Percent of a Number Story Problems
59	Geometry in Art (Perspective); Scientific Notation with Large Numbers
	Week 21 Quiz
60	More on Polygons and Angles; Transformations
61	More Simplifying with Negative Exponents; More Order of Operations with Signed Numbers
62	Functions and Relations (no graphing)
	Week 22 Quiz
63	Fraction/Decimal/Percent of a Number Story Problems: Solving for P, D and F (Part III); Percent Increase
64	Scientific Notation with Small Numbers
65	Collecting Data; Making Tables and Graphs
	Week 23 Quiz
66	Domain and Range; Proportion Word Problems, Part I of II
67	Area
68	Functions with Graphing: Linear Functions and x-y Tables
	Week 24 Quiz

69	Volume; Right and Oblique Solids with a Given Base Area
70	Functions with Graphing: Linear Functions and Slope-Intercept Method
71	Proportion Word Problems, Part II: Ratios Involving Totals, Including Percent
72	Operations with Scientific Notation
	Week 25 Quiz
73	Functions with Graphing: Nonlinear Functions
74	Data Interpretation and Representation with Charts
75	The Binary Numeral System; Pixels
	Week 26 Quiz
	Exam 3
76	Functions with Graphing: Domain and Range from Graphs; Dividing Terms and Canceling
77	More on Linear Functions: Creating a Linear Equation to Solve a Problem
78	Simplifying More Complex Operations with Exponents; Evaluating Scientific Formulas
79	More on Linear Functions: Creating a Linear Equation from a Graph
	Week 28 Quiz
80	More on Linear Functions: Horizontal and Vertical Lines
81	Logic: Converse, Inverse and Contrapositive; What is Calculus?
82	Two Step Equations, Inequalities
	Week 29 Quiz
83	More on Linear Functions: Linear Inequalities
84	Systems of Equations; More on Roots and Radical Signs
85	Addition and Subtraction with Mixed Measures; Simplifying Complex Fractions
	Week 30 Quiz
86	Trigonometry Basics
87	Word Problems and Data from a Chart; Bits, Bytes and Binary Numbers

88	Logic: The Syllogism; Surface Area
	Week 31 Quiz
89	Infinitesimals and the Limit
90	The Derivative and Slope; Solving Multivariable Equations
91	Calculus and the Trinity; Area and Volume Conversions
	Week 32 Quiz
92	More on Derivatives and Tangent Lines; Calculus and the Study of Speed
93	Interest Rate, Savings and Debt
94	The Integral and Counting Squares; Imaginary Numbers
	Week 33 Quiz
95	Mean, Median, Mode and Range
96	Probability: Compound Events
97	Linear Regression and Best Fit
	Week 34 Quiz
98	Sequences and Series
99	Sigma Means Sum
100	Matrices
	Week 35 Quiz
	Exam 4

Assignment Chart

Shormann Pre-Algebra

Lesson					
1	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
2	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
3	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 1	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
4	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
5	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
6	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 2	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
7	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
8	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
9	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 3	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
10	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
11	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
12	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 4	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
13	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
14	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
15	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 5	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
16	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
17	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
18	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 6	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	

Lesson					
19	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
20	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
21	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 7	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
22	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
23	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
24	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
25	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 8	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
Practice Exam 1	❑ Study	❑ Practice Exam 1	❑ Corrections		
Practice Exam 2	❑ Study	❑ Practice Exam 2	❑ Corrections		
Exam 1 (Attempt 1)	❑ Study	❑ Take Exam 1	❑ Corrections		
Exam 1 (Attempt 2)	❑ Study	❑ Take Exam 1	❑ Corrections		
26	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
27	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
28	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 10	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
29	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
30	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
31	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 11	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
32	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
33	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
34	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 12	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	

Lesson					
35	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
36	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
37	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 13	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
38	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
39	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
40	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 14	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
41	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
42	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
43	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 15	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
44	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
45	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
46	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 16	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
47	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
48	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
49	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
50	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 17	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
Practice Exam 1	❑ Study	❑ Practice Exam 1	❑ Corrections		
Practice Exam 2	❑ Study	❑ Practice Exam 2	❑ Corrections		
Exam 2 (Attempt 1)	❑ Study	❑ Take Exam 2	❑ Corrections		
Exam 2 (Attempt 2)	❑ Study	❑ Take Exam 2	❑ Corrections		
51	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
52	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections

Lesson					
53	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 19	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
54	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
55	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
56	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 20	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
57	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
58	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
59	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 21	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
60	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
61	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
62	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 22	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
63	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
64	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
65	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 23	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
66	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
67	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
68	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 24	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
69	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
70	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
71	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 25	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
72	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
73	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
74	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections

Lesson					
75	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 26	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
Practice Exam 1	❑ Study	❑ Practice Exam 1	❑ Corrections		
Practice Exam 2	❑ Study	❑ Practice Exam 2	❑ Corrections		
Exam 3 (Attempt 1)	❑ Study	❑ Take Exam 3	❑ Corrections		
Exam 3 (Attempt 2)	❑ Study	❑ Take Exam 3	❑ Corrections		
76	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
77	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
78	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
79	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 28	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
80	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
81	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
82	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 29	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
83	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
84	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
85	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 30	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
86	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
87	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
88	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 31	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
89	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
90	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
91	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 32	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	

Lesson					
92	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
93	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
94	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 33	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
95	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
96	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
97	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 34	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
98	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
99	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
100	❑ Reading	❑ Lecture	❑ Facts Drill	❑ Practice Set	❑ Corrections
Quiz 35	❑ Study	❑ Take Quiz	❑ Facts Drill	❑ Corrections	
Practice Exam 1	❑ Study	❑ Practice Exam 1	❑ Corrections		
Practice Exam 2	❑ Study	❑ Practice Exam 2	❑ Corrections		
Exam 4 (Attempt 1)	❑ Study	❑ Take Exam 4	❑ Corrections		
Exam 4 (Attempt 2)	❑ Study	❑ Take Exam 4	❑ Corrections		