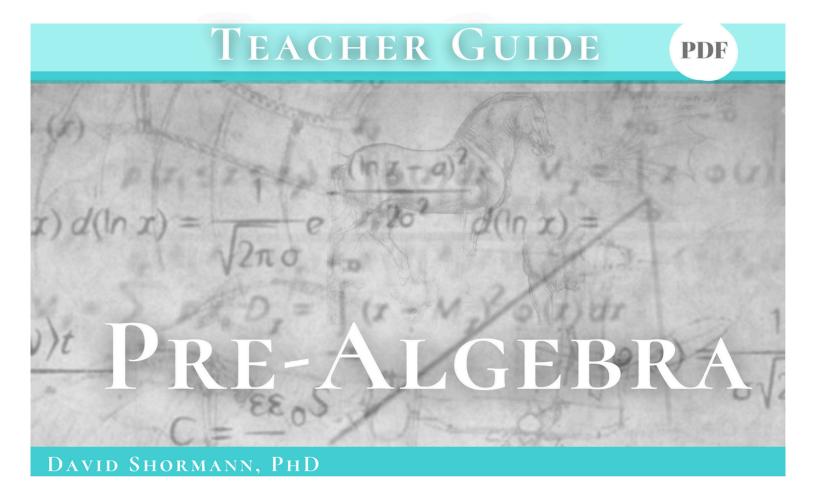
SHORMANN MATHEMATICS





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. Don't worry, you don't need to 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
- 4. 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
- 5. Read: The Timed Method
- 6. Required Materials:
 - Select one: <u>Geogebra Geometry App</u> 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

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

Parents: Login to the eLearning Campus here Login Instructions

Important Resources

<u>Grade Changes and Resets</u>

Contact Tech Support NCAA

<u>Transcripts & Credits</u> <u>Comparison to Saxon 8/7</u>

Ask Dr. Shormann

Teacher Guide

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Course Setup

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Simplified Grading Method

Scope and Sequence:

- Scope
- Course Sequence

Assignment Chart

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!

Prerequisite

See: <u>Is My child ready for Pre-Algebra?</u>

Credits:

1 Prealgebra 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

While Shormann Pre-Algebra is an honors level course, it is easily modified for use as a standard course by adding extra credit and using the Standard Grade Scale below.

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

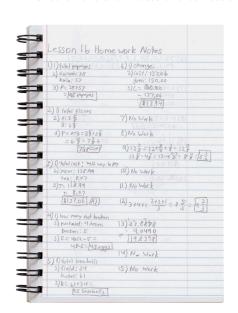
Parent Responsibilities

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

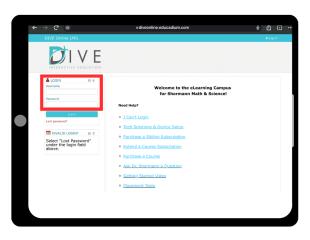
I. Check the Lecture Notes

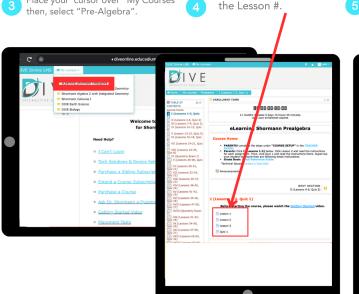
After each lesson is completed, have the student bring their notebook to you, which should have their notes and corrections.

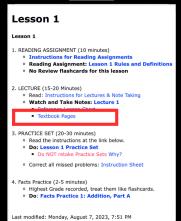


Place your cursor over "My Courses"

Go to diveonline.educadium.com. Login using the same login the student uses.







This opens the Assignment Page.

Select "Textbook Pages".

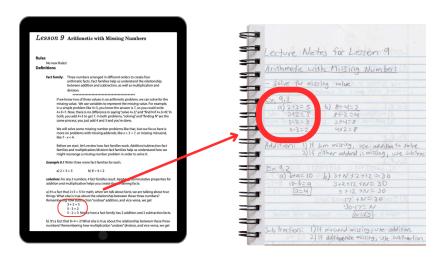
Copyright ©2021 Digital Interactive Video Education. All rights reserved.

In the right menu, select

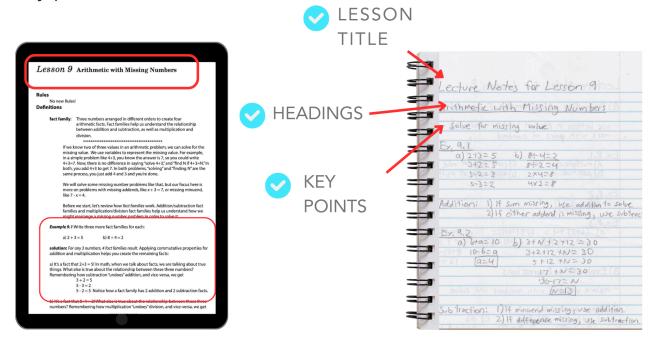


After each example problem is taught, students should **pause** the lecture & **solve** the example problem on their notes.

Briefly compare the example problems in the textbook pages to the example problem in the student's notes.



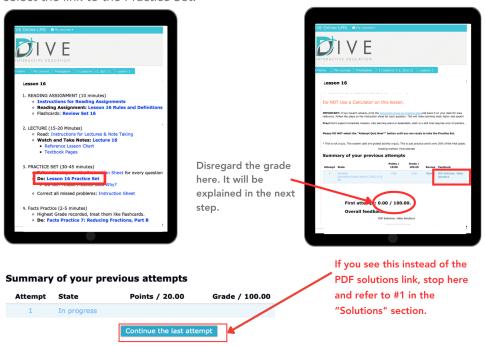
They should also take <u>brief</u> notes with the lesson title, headings, key points, and formulas.



II. Check the Practice Set

1 Go back to the Assignment page then, select the link to the Practice Set.

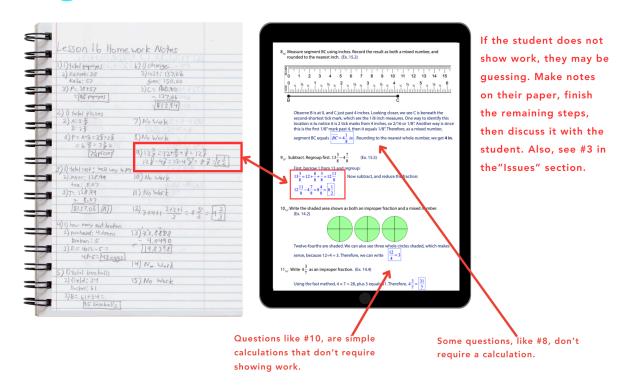
2 Select the link to the "PDF Solutions". If you don't see it, read the note below.





Before entering or selecting an answer, students should solve each math problem on their Practice Set Notes.

3 Briefly compare the PDF Solutions to the student's notes.

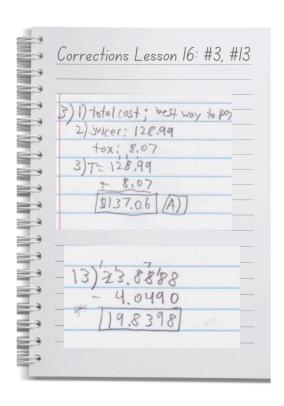


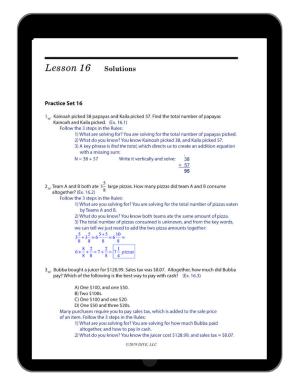
Check the Corrections III.

After completing the Practice Set, students should watch the video solutions for each question marked wrong then, solve it correctly on their notes.

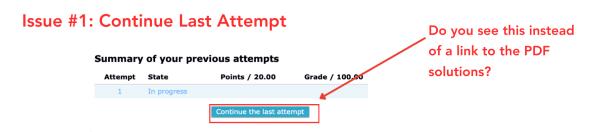
- Compare the corrections on the student's notes to the Solutions **PDF**

Did the student solve each incorrect problem on their "Corrections" page?





ISSUES WITH STUDENT WORK



This means the student either did not finish the assignment or they forgot to select the "Submit All & Finish" button.

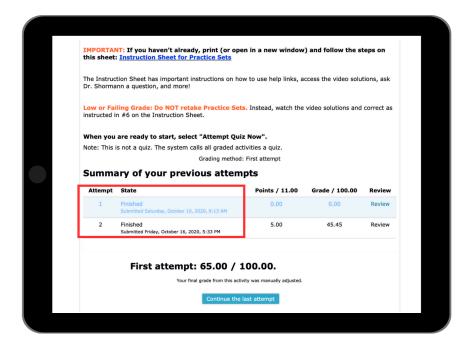
If the student <u>DID answer</u> all the questions he could, simply click the "Continue Last Attempt" button to submit the assignment. Then, have the student follow the steps on page 2 of the "Instruction Sheet for Practice Sets" to watch the video solutions for missed problems and correct them on paper.

If the student <u>DID NOT</u> answer all the questions he could, he should finish the assignment by following the steps on the "Instruction Sheet for Practice Sets" to answer all the questions he can and submit it. Then, follow the steps on page 2 of the "Instruction Sheet for Practice Sets" to watch the video solutions for missed problems and correct them on paper.

Issue #2: More than one attempt is listed.

The eLearning course allows students to re-take practice sets to study for exams. But, only the first attempt is recorded in the online grade book.

Because the student sees all the answers after the first attempt, we recommend you use only the first attempt when checking the student's work.



Scheduling

Shormann Pre-Algebra is set up on a 30 week schedule. Since a school year is generally 36 weeks, there are an additional six weeks that can be used when extra time is needed to grasp a concept. A good way to ensure the student has time to relearn as needed, is to use the timed method (below).

Timed Method: Frustration Free Math

Instead of requiring the student to complete a lesson each day, have Pre-Algebra students work on math for <u>no more than an hour or so per day</u>. At the end of this time, regardless of how much of the lesson is completed, stop the lesson and have them pick-up where they left off the next day. Strong math students can work on math at least 4 days per week and <u>struggling or reluctant math students should</u> work on math 5 days per week.

This allows the student to learn at their own pace, giving them the extra time needed to grasp a new concept or relearn forgotten concepts by rewatching video lessons, studying the help links, etc. On the other hand, when a student is required to complete a lesson per day, they quickly realize that going back and relearning can make the lesson take too long 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. <u>Frustration Free Learning</u>

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.

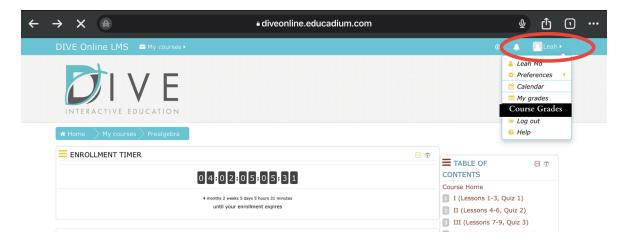
Course Components

- **I. Lessons:** A daily lesson consists of 4 parts:
 - o Reading Assignments (Rules and Definitions): Instruction Sheet
 - Video Lecture: <u>Instructions for Lectures</u>
 - o Practice Set: Practice Set Instructions
 - Facts Practices:
- II. Quizzes: Quiz Instruction Sheet
- III. Quarterly Exams: Quarterly Exams Instruction Sheet

Online Grade Book & Grading

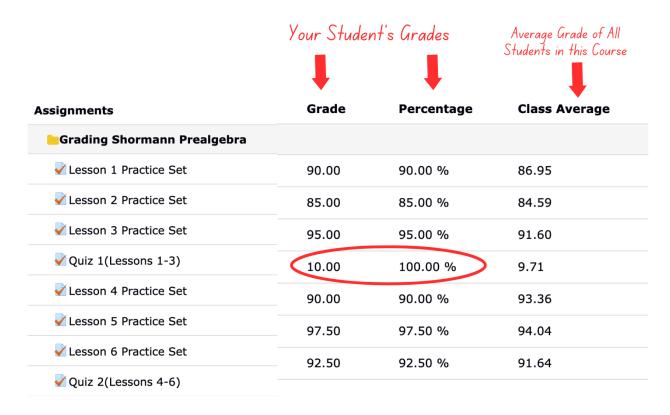
Note: If your student has a learning disability or you are not using the course as instructed (skipping assignments, giving more time on exams, etc.), see the Learning Disabilities section below.

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



2. The grade book will open.

Grade Book: Joe Smith



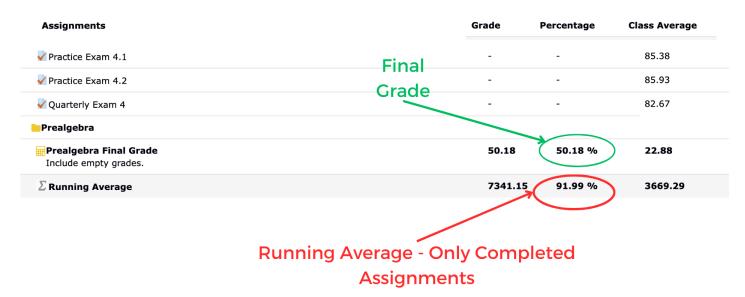
Grade: This is your student's grade in points.

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 solutions 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 <u>Transcripts & Credits</u>

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 grading system 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 curriculum, like Abeka or Bob Jones.

If your student corrected missed problems for all assignments, extra credit can be added at the end of the course by following the option below. However, this is optional because the eLearning system already includes some extra credit by allowing students to take the exams twice and averaging the scores which is like adding up to 10 points to each exam grade.

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.

After determining the final grade, add it to the Certificate (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. However, you will need to manually record grades or use the "Simplified Grading Method" (see above) instead of using the online grade book.

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 two scores together.
- 4. Have the student correct missed problems by following the Quiz Instructions linked above the quiz.
- 5. Use the "Simplified Grading Method" below.

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. If they correct all missed problems, **add 100 points to their grade.** Then, divide it by two. This is the equivalent of giving them two full attempts and averaging the scores.
- 5. For grade recording and calculating a final grade, see the next section below.

Grading for Learning Challenged Students

Because students with learning challenges often require many accommodations, instead of using the grades in the eLearning course and submitting multiple grade change requests, manually record the four exams, then use the Simplified Grading Method to calculate the final grade.

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, use this simple method to give a completion grade of 90 for all Facts Practice, Quizzes, Practice Sets. This way, you don't need to submit multiple grade change requests or manually record all the scores. All you need is the average of the four exam grades to put in 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.

Scope & Sequence

Shormann Pre-Algebra

To jump to the Course Sequence: <u>Course Sequence</u>

Scope

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: $a \times b$, $a \cdot b$, 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

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

Shormann Pre-Algebra Course Sequence

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

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	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
85	Addition and Subtraction with Mixed Measures; Simplifying Complex Fractions Week 30 Quiz
85	
	Week 30 Quiz

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

Shormann Pre-Algebra

Assignment Chart

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	٥	Facts Drill		Practice Set	۵	Corrections
20	٥	Reading		Lecture	٥	Facts Drill		Practice Set	۵	Corrections
21		Reading		Lecture	0	Facts Drill		Practice Set	٠	Corrections
Quiz 7		Study		Take Quiz		Facts Drill		Corrections		
22		Reading		Lecture	٥	Facts Drill		Practice Set	٠	Corrections
23	٠	Reading		Lecture	٥	Facts Drill		Practice Set	۵	Corrections
24		Reading		Lecture	۵	Facts Drill		Practice Set	۵	Corrections
25	۵	Reading		Lecture	۵	Facts Drill		Practice Set	۰	Corrections
Quiz 8	٥	Study		Take Quiz	٠	Facts Drill	٠	Corrections		
Practice Exam 1	ū	Study		Practice Exam 1	0	Corrections				
Practice Exam 2		Study		Practice Exam 2		Corrections				
Exam 1 (Attempt 1)	ū	Study	۵	Take Exam 1	<u> </u>	Corrections				
Exam 1 (Attempt 2)	٠	Study	٠	Take Exam 1	٥	Corrections				
26		Reading		Lecture	٥	Facts Drill		Practice Set	٠	Corrections
27	۵	Reading		Lecture	۵	Facts Drill	٠	Practice Set	ū	Corrections
28	0	Reading		Lecture	٥	Facts Drill		Practice Set	ū	Corrections
Quiz 10		Study		Take Quiz	۵	Facts Drill		Corrections		
29		Reading		Lecture	۵	Facts Drill	٦	Practice Set	۵	Corrections
30	۵	Reading		Lecture	۵	Facts Drill		Practice Set	۵	Corrections
31	٥	Reading	ū	Lecture	٥	Facts Drill		Practice Set	۵	Corrections
Quiz 11	٠	Study		Take Quiz	٥	Facts Drill		Corrections		
32	٥	Reading		Lecture	٥	Facts Drill		Practice Set	٠	Corrections
33	۵	Reading		Lecture	۵	Facts Drill		Practice Set	۵	Corrections
34	۵	Reading		Lecture	٥	Facts Drill		Practice Set	٠	Corrections
Quiz 12		Study		Take Quiz	۵	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		