

TEACHER GUIDE

PDF

The background of the cover is a grayscale image of a horse, possibly a stallion, standing in a field. Overlaid on this image are various mathematical formulas and diagrams in a light, faded font. Some of the visible formulas include  $d(\ln x) = \frac{1}{x}$ ,  $(\ln x - a)^2$ ,  $\frac{1}{\sigma\sqrt{x}}$ , and  $C = \dots$ . There are also some geometric diagrams and other mathematical symbols scattered across the scene.

PRECALCULUS  
WITH TRIGONOMETRY

DAVID SHORMANN, PHD

# 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](#)
3. Decide: [Hybrid Offline Method for Practice Sets](#)
4. To ensure your device is setup for our eLearning system, please follow the: [Computer & Device Setup Instructions](#)
5. Print and read these Instruction Sheets:
  - [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. Saxon Algebra 2 Users: Optional [Geometry Prep Lessons](#) for Shormann Precalculus
8. Required Materials:
  - Select one: [Geometry App or a Ruler & Drawing Compass](#)
  - Select a [Recommended Calculator](#)
  - 2-inch binder and 3-hole paper (blank or college-ruled)  
OR a spiral notebook for lectures/corrections and copy paper for homework
  - Small spiral notebook (4x6) for formulas
  - Computer or tablet with Internet access and headphones or speakers
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.](#)

## Important Resources

[Grade Changes and Resets](#)

[Ask Dr. Shormann a Homework, Test, or Quiz Question](#)

[Contact Tech Support](#)

[NCAA](#)

[Advanced Placement](#)

[Transcripts & Credits](#)

## Teacher Guide

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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, video solutions, and Q&A email support.*

*Shormann Algebra 1 and 2 integrate 1 full credit of geometry. When finished with both, one full credit of algebra 1, 2, and geometry are earned! All the concepts required for a variety of standardized tests, including the redesigned PSAT and SAT, the ACT, and the CLEP College Algebra and College Mathematics exams, are taught then continually reviewed, developing fluency and raising test scores.*

*After completing Shormann Precalculus, students can spend 2-3 weeks using the included [CLEP Professor Precalculus](#), a short prep course that specifically prepares for the CLEP exam. A passing score on this exam can earn up to 3 college credits.*

*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!*

## Credits

1 Precalculus with Trigonometry Credit

Up to 3 CLEP Precalculus Credits\*\*

**Students who took Saxon Algebra 2** (2nd or 3rd Edition) followed by Shormann Precalculus also earn 1/2 Geometry Credit\*

**Student Completed only 1/2 of a Geometry Course** followed by Shormann Precalculus also earn 1/2 credit of Geometry\*

### **How is 1/2 credit of Geometry earned in Shormann Precalculus?**

Shormann Precalculus includes all the geometry concepts required to earn the second 1/2 credit of Geometry. If only **1/2 credit of Geometry** was earned prior to taking Precalculus, the remaining 1/2 credit of Geometry & 1 credit is earned in Shormann Precalculus.

### **Why can't I list 1/2 credit of Geometry for Shormann Precalculus?**

If one full credit of Geometry is earned prior to taking Shormann Precalculus, the geometry lessons in Precalculus are considered review. It is improper to list more than 1 credit of Geometry on your transcript.

## Pre-Requisites

Any of the below:

- Shormann Algebra 2
- Saxon Algebra 2
- Any Publisher's Algebra 2 and Geometry Course

**REQUIRED:** Read [Placement Info & Tests](#)

## Course Description

Shormann Precalculus is an honors-level, algebra- and trigonometry-based course that provides comprehensive instruction in standard precalculus topics, with a special emphasis on advanced algebra and trigonometry concepts found on the CLEP and AP Precalculus Exams. Functions are a priority, with both standard and real-world applications of the following types: linear, quadratic, cubic, polynomial, rational, exponential, logarithmic, absolute value, trigonometric and piecewise-defined. Students learn to work with functions presented in graphic, symbolic, verbal and numeric form. Calculus fundamentals are also presented and practiced, which improves student confidence and success in college-level Calculus I. Along with the included [CLEP Professor](#) course, Shormann Precalculus provides specific preparation for the CLEP Precalculus exam. [When can I take a CLEP exam](#)

## Honors or Standard Course Options

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. Or, if the student earns a score of 50 or higher on the **CLEP Precalculus Exam** (use [CLEP Prep Course](#)) Shormann Precalculus can be listed as an honors course.

### Honors Grade Scale

A – 93-100  
B – 84 – 92  
C – 74 – 83  
D – 65 – 73  
F – 64 or below  
I – Incomplete

### Standard Grade Scale

A – 90 -100  
B – 80 – 89  
C – 70 – 79  
D – 60 – 69  
F – 59 or below  
I – Incomplete

## Using Shormann Math in a Classroom or Co-op

The beta-test of Shormann Algebra 1 was performed with students in a weekly live online classroom. While we haven't used it yet in a daily classroom setting, we do know it works well in a homeschool co-op style class that meets weekly. Students complete their daily lessons at home, and come to class to ask questions, review the lessons covered that week, and turn in handwritten work + lecture notes. They can then take the online quiz, or take a different one administered by the teacher. At the end of each quarter, they can take the online quarterly exam, or take a different one administered by the teacher. For more information on starting a co-op class in your area, contact [support@diveintomath.com](mailto:support@diveintomath.com).

## Standardized Test Prep

The main purpose of *Shormann Math* is to help students use math to become more creative like their Creator, glorifying Him and serving others. However, it also provides excellent preparation for standardized tests. Although all the topics required to excel on college entrance exams are taught in Shormann Algebra 2, Shormann Precalculus provides ample review of these concepts to ensure students maintain the fluency required to excel on these exams. [PSAT, SAT, and ACT Test Prep Recommendations](#)

## 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](#)

## RECOMMENDED: 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 Precalculus is set up on a 30 week schedule. Since a normal school year is generally 36 weeks, there are six additional weeks that can be used, as needed, to relearn a forgotten concept or grasp a new concept. A good way to ensure the student has time to re-learn, as needed, is to use the timed method (below).

### Fluency = Accuracy + Speed

Math is a language. It is the language of science, a tool used to discover, analyze, and understand God and the world He created. Like reading or speaking a language, fluency is required to use math to communicate and learn. While the main focus of most math curricula is simply accuracy, fluency goes a step further, continuing to practice the skill for a long period of time, developing fluency.. Like reading, math fluency is required to fully understand and apply it to new situations like science or questions on a standardized test.

### Timed Method: Frustration Free Math

Instead of requiring the student to complete a lesson each day, have Algebra 1 students work on math for no more than an hour to an hour and a half per day. 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 struggling or reluctant math students should 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. [Frustration Free Learning](#)

### **The Timed Method: The key to developing mastery and fluency.**

The [timed method](#) is part of an efficient system Dr. Shormann created while teaching Saxon Math to hundreds of thousands of homeschool students over the past 20 years. This system is designed to ensure all students succeed in math by allowing them to **learn at their own pace**. It is widely accepted that students who learn at their own pace achieve higher levels of learning, building mastery and fluency without frustrating or overwhelming them. While strong math students will go further, often completing Calculus in 11th grade, average or remedial math students may take longer and only complete Algebra 2 or Precalculus in high school. That's okay! The important thing is that they understand what they have learned. However, we often see reluctant or struggling math students who use the [timed method](#) become very strong math students.

### **If I use the timed method, how will my student finish on time?**

The [timed method](#) usually has the opposite effect of what parents expect. Once the student knows that they only have to work on math for the specified amount of time, they are free to focus on learning instead of wondering, "how long is this going to take?". If they are stuck on a problem, they are more likely to relearn by watching the linked video lecture because they know that no matter how many times they do this, it will not make their math lesson longer. It may take a few weeks, but as they start to build mastery and then fluency, learning math will become faster and easier. Keep in mind, Shormann Algebra 1 & Algebra 2 each earn 1.5 credits. Therefore, students can take up to three semesters to complete each course. [Learn more.](#)

### **Three Semester Option**

If the student is using Precalculus to earn  $\frac{1}{2}$  credit of geometry (see page 4) it can be used as a three semester course. All other students should use it as a one year

course. Each eLearning subscription is good for 24 months so every student can successfully complete the course. **Instead of scheduling the lessons over 3 semesters, use the [Timed Method](#) to allow the student to learn at their own pace.**

## Earn 14 College Credits

Shormann Algebra 2, Precalculus, and Calculus provide specific preparation for select CLEP and AP exams. If a passing score is earned on these exams, an additional high school math credit can be listed on the high school transcript.

## Don't Expect Immediate Mastery

I strongly discourage incorporating “immediate mastery” methods into Shormann Math (Saxon Math, too!). 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 re-learn 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. 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 3 parts:
  - **Reading Assignments (Rules and Definitions):** [Instruction Sheet](#)
  - **Video Lecture:** [Instructions for Lectures](#)
  - **Practice Set:** [Practice Set Instructions](#)
  
- 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”.

The screenshot shows the DIVE Online LMS interface. The user menu in the top right corner is open, and the 'Course Grades' option is highlighted. The interface includes a navigation bar with 'Home', 'My courses', and 'Prealgebra'. Below the navigation bar, there is an enrollment timer showing 4 months, 2 weeks, 5 days, 5 hours, and 31 minutes remaining. A table of contents is visible on the right side of the page.

2. The grade book will open.

## Grade Book: Joe Smith

Assignments	Your Student's Grades		Average Grade of All Students in this Course
	Grade	Percentage	
<b>Grading Shormann Prealgebra</b>			
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.

Assignments	Grade	Percentage	Class Average
✓ Practice Exam 4.1	-	-	93.14
✓ Practice Exam 4.2	-	-	94.20
✓ Quarterly Exam 4	-	-	87.22
$\Sigma$ Shormann Algebra 1 Running Average	1957.57	86.62 %	4596.11
Final Grade Simple weighted mean of grades. Include empty grades.	11.29	11.29 %	37.21

*Running Average - Only Completed Assignments*

*Final Grade*

### 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 [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 not 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".

Practice Sets & Practice Exams: 30%

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.

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. 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 and Quizzes, 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. (.30)

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!

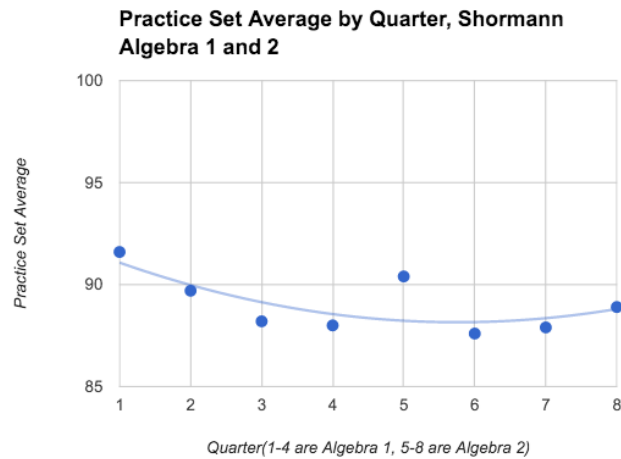
Results matter because they reveal whether or not a new product really works. And while statistics certainly don't reveal everything about a new product, they can certainly reveal many things. **Most publishers don't provide any details of student performance.** Shormann Math is different, and we are thrilled we can provide the public with the following statistics to help you make informed decisions.

### Overall performance (Algebra 1)

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

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



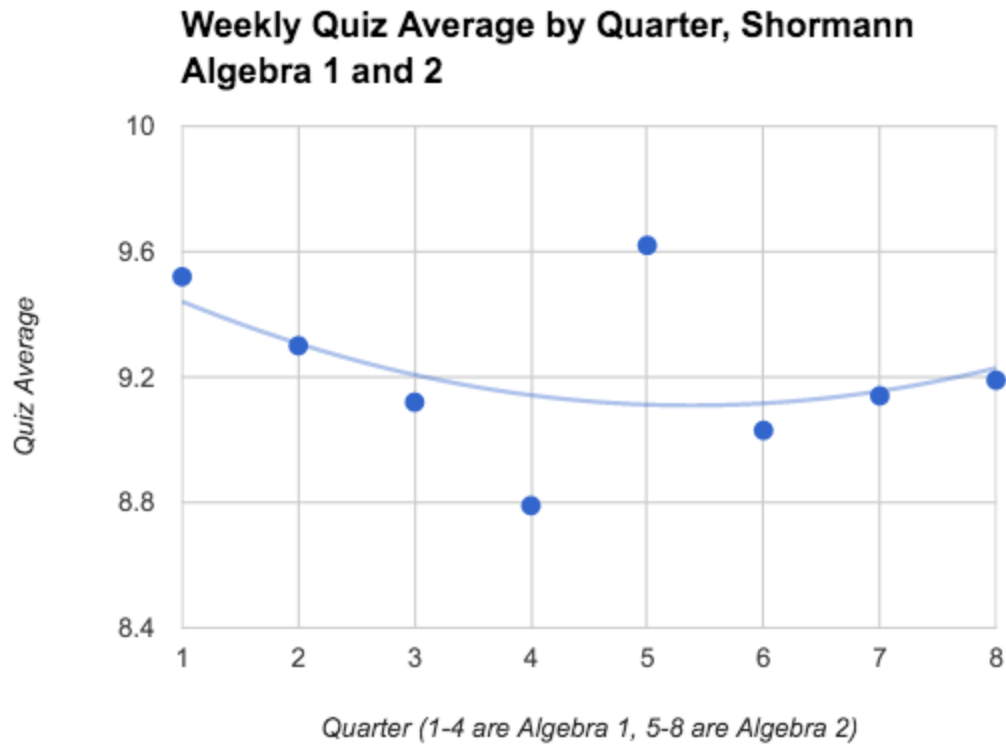
Discussion: You've probably never seen statistics on student performance in a math class before, which is why it is important to discuss the data! We had hoped the average student would achieve a Practice Set average above 85%, and that was achieved in all 8 quarters! 85% is a good cutoff for determining whether students are understanding, and retaining most of the concepts learned.

Note also the high first quarter average in both Algebra 1 (Quarter 1) and Algebra 2(Quarter 5). Because Shormann Math is built on John Saxon's method of integrating geometry and algebra, students using Saxon Math 8/7 or Saxon Algebra  $\frac{1}{2}$  will be most comfortable starting Shormann Algebra 1. However, not all beta-test students used Saxon previously, and not all Shormann Algebra 2 students used Shormann Algebra 1(most used Saxon). Therefore, the high first quarter averages are a good indication that students who successfully completed any pre-algebra course should do just fine in Shormann Math, and non-Shormann Math Algebra 1 students can succeed in Shormann Algebra 2.

Finally, in the trendline shown, notice the dip in the middle of both courses. This seems like a natural pattern if you consider the facts that, during this time,

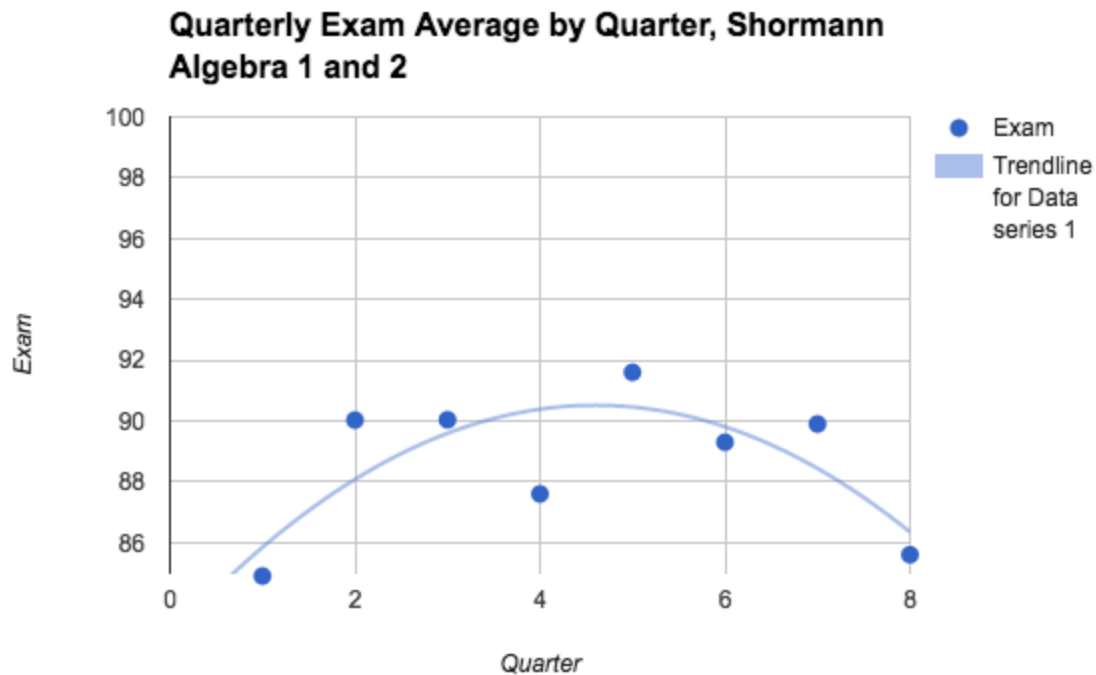
1. Young students are being exposed to new and increasingly complex concepts.
2. As time progresses, students mature and begin to learn what it takes to study, and retain, increasingly complex concepts.
3. Becoming proficient at a subject takes time, so don't quit too soon if it seems challenging! Completing Shormann Algebra 1 and 2 also includes a geometry credit, so if you are doing the self-paced option, it's perfectly fine to spread this out over 12 quarters (3 years) instead of 2.

## Weekly Quizzes



Discussion: Weekly Quizzes show a similar trend to the Practice Sets, which affirms what we discussed in 1-3 above. 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 eight quarters!

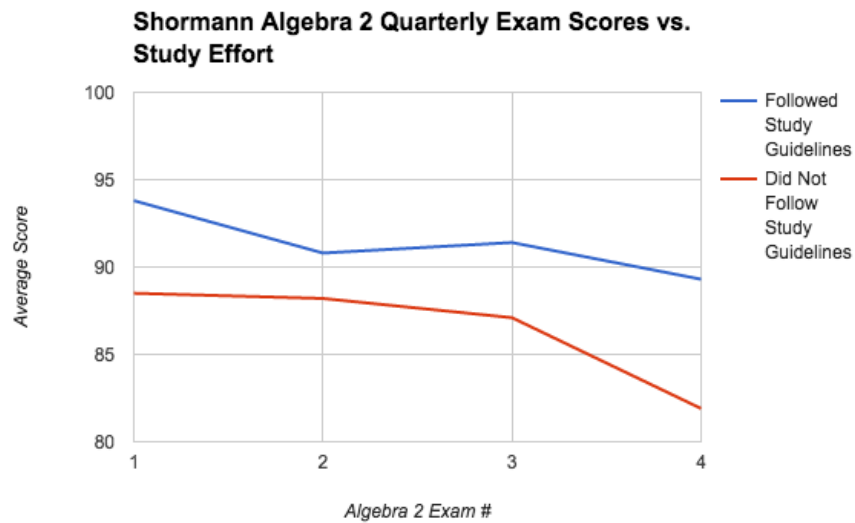
## Quarterly Exams



Discussion: The trend for quarterly exams is not the same for Practice Sets and Weekly Quizzes, as the trend is for maximum scores in the 5th Quarter, which is the introductory quarter of Algebra 2. One of the big reasons for this trend has to do with not giving the students enough practice prior to Quarterly Exam 1 in Algebra 1. This is one reason we beta-tested the course prior to releasing it to the general public, so we could make any adjustments we believed were necessary. After Exam 1, we started providing students with two practice exams, and afterwards, all quarterly exam averages improved.

Another big reason for the trend is that not all students took advantage of the practice exams, and/or did not follow instructions for studying. On the week of a quarterly exam, students are given study tips. **The main thing students need to do is practice, as there is simply no substitute to success in mathematics, or pretty much anything else you want to be good at, than to practice. A lot.**

Two key steps in properly studying include 1) retake all Weekly Quizzes and 2) complete both Practice Exams. Because our eLearning campus provides detailed information on each student's Quiz and Practice Exam attempts, I was able to determine which students studied properly (completed both 1) and 2) above) from those who did not (completed either 1) or 2) or neither). Results are shown below for the beta-test students in Shormann Algebra 2.



The conclusion from the above graph is obvious: students who study harder do better in Shormann Math! Students who followed the study guidelines averaged at or well above 90% (A), while students who did not follow the guidelines averaged below 90% (B). The results also show that Shormann Math is providing the tools students need to become fluent in mathematics.

Finally, 85%+ is an indicator of good retention and understanding of concepts covered in a quarter. For all 8 quarters, student averages shown in the Quarterly Exam Average by Quarter chart 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 in the beta courses responded very well!

Keep in mind, too, that these students did the "high performance level" version of Shormann Math, where the course is completed in 30 weeks (37 weeks if you count the breaks), and they did not have as much time to complete the quizzes or quarterly exams. In the standard course, students have 5 extra minutes per quiz, and 15 minutes extra on quarterly exams. You also receive a 2-year subscription per course, almost 3 times more time than beta-test students were allowed.

# Scope & Sequence

## Shormann Precalculus

To jump to the sequence: [Course Sequence](#)

### Scope

<b>Number</b>
Defining Mathematics
History of Number
Permutations and Combinations
Operations with whole number exponents
Operations with fractional exponents
Operations with scientific notation
Logarithm means exponent
Subsets of Real Numbers
Union and intersection of sets
Complex numbers
Operations with complex numbers
Subsets, disjoint sets, equivalent sets
Sets and Venn (Euler) diagrams
Sets and Cartesian product
Absolute value and order
Counting problems, including permutations and combinations
Special number types, including binary
<b>Ratio (including proportional relationships)</b>
Rational and irrational numbers
Rational and radical equations
Logarithms as "ratio numbers"
Direct and inverse variation
Product rule for logarithms
Quotient rule for logarithms
Power rule for logarithms
Proportion and the Christian adventure
Ratio word problems
Simplifying complex fractions
<b>Algebra (including algebra of functions)</b>
History of Algebra

Algebra fundamentals review
Special Polynomials
Combined operations with algebraic expressions
Combined operations with logarithms
Completing the square
Quadratic formula
Modeling functions numerically
Modeling functions symbolically
Modeling functions verbally
Finding domain and range from functions
Operations with functions
Evaluating functions, including nonstandard forms
Composite functions
Symbolic and verbal (tabular) representation of functions
Symbolic and verbal (tabular) transformation of functions
Operations with polynomials
Operations with exponents
Operations with logarithms
Linear equations
Quadratic equations
Absolute Value equations
Polynomial equations
Polynomial division
Synthetic division and the remainder theorem
Synthetic division and the factor theorem
Rational equations
Radical equations
Exponential equations
Logarithmic equations
Linear inequalities
Quadratic inequalities
Absolute value inequalities
Linear systems of equations
Non-linear systems of equations
Word problems and systems of equations(value, uniform motion, etc.)
Partial fractions
<b>Geometry (Including Logic)</b>

History of Geometry
Geometry Fundamentals Review
Coordinate geometry
Distance, midpoint
Properties of parallelograms and trapezoids
3-dimensional geometry
Geometry in art and creation
Geometry in 3D design
Euclid, axioms and postulates
Euclid, theorems, proofs
Triangle similarity
Triangle congruency
Triangle proofs
Circle relationships
Circle proofs
Construction
Non-Euclidean Geometry
Pythagorean theorem
Logic fundamentals
Syllogisms
Truth tables
Conjunctions, disjunctions, implications, and negations
Conditional statements
Necessary and sufficient conditions
Converse, inverse, and contrapositive
Hypotheses, conclusions, and counterexamples
<b>Analytical Geometry (including graphical forms of functions)</b>
History of Analytical Geometry
Analytical geometry fundamentals review
Rectangular Coordinate System
Linear equations
Linear inequalities
Nonlinear inequalities
Creating exp. and log. equations from word problems
Functions and relations
Modeling functions graphically
Finding domain and range from graphs



Finding x-intercepts (roots) of polynomial functions (equations), with and without a graphing calculator

Finding extrema from graphs (with and without graphing calculator)

Finding poles (asymptotes) and zeros

Finding inverse functions

Graphing functions

Complex roots

Applications from algebra and geometry

Conics, including parabolas, circles, ellipses and hyperbolas

Even and odd functions

Inverse functions

Graphical representation of functions, including linear, nonlinear, and piecewise defined

Graphical transformation of functions, including linear, nonlinear, and piecewise defined

Linear functions as models

Nonlinear functions as models

Linear system word problems (graphical forms)

Nonlinear system word problems, with and without graphing calculator

Nonlinear systems of inequalities (graphical forms)

## Measurement

History of measurement

Why standards matter

Rate conversions

Length conversions

Area conversions

Volume conversions

Currency (money) conversions

Special conversions, like finding cost per part

Perimeter, area, surface area and volume

Chemical mixture problems

Gas law problems

Interest rate, savings, and debt, and what the Bible has to say about it

## Trigonometry

Trigonometry and right triangle basics

Trigonometry and Unit Circle Basics

Inverse trig functions

Reciprocal trig functions

Composite trig functions

Products of complex numbers

DeMoivre's theorem, Euler's formula, and complex roots
Parallelogram law
Polar coordinates and conversion to rectangular, and vice-versa
Vectors
Resultant vectors
Resultant vectors, force applications
Trigonometric equations
Graphing Trig functions
Transformations of Trig functions
Basic Trig. Identities
Law of Sines
Law of Cosines
Sum and Difference Trig. Identities
Half and double angle trig identities
Periodicity
Periodic and other Trig functions with a calculator
Periodic and other Trig functions without a calculator
Non-periodic functions
Trig functions as models(finding height of an object, damping functions, etc.)
Using Trig to find area of inscribed regular polygons and connection to finding integrals
Pythagorean theorem applications
<b>Calculus</b>
History of Calculus
To understand calculus, just believe
Limits of simple continuous and discontinuous functions
Limits of rational polynomial functions
Infinity as a limit
Special limits
Limit definitions of fundamental derivatives
Limit definition of an integral
Calculus is about rates of change
Derivative means slope
Derivatives of polynomials, especially $x^2$
Using derivatives to find equations of tangent lines
Derivative applications, including finding extrema
2nd derivative
Derivatives of sums and differences

Product and quotient rules for derivatives

Chain Rule for derivatives

Related rates

Integrals I (integrals as area under a curve)

Integrals II (summing area under curve using upper rectangles;  $f(x)$  times  $\Delta x$ )

Integrals III (definite integrals;  $f(x)$  times  $dx$ )

Integrals IV (antiderivatives)

Fundamental theorem of calculus

## Statistics

Counting problems, including permutations and combinations

Computation of probabilities of simple and compound events

Simple conditional probability

One-variable data and the normal distribution, histograms

Mean, median, mode and range

Standard deviation and variance

Data interpretation and representation: tables; bar, line, circle graphs; pie charts, scatterplots, histograms

linear regression, including the least squares algorithm

nonlinear regression

Student's t-test

## Computer Mathematics (see also Logic in Geometry section)

Pixels, bits, and the binary numeral system

Sequences

Series

Infinite Series

Resolving fractions into infinite series

Deriving formulas for infinite series

Sums

Factorials

Pascal's triangle

Binomial Theorem

Matrices, finding determinants and operations

Cramer's rule

Boolean algebra

Recurrence problems

## Shormann Precalculus with Trigonometry

## Course Sequence

**NOTE:** To build a firm foundation, Lessons 1-25 introduce fundamental rules and definitions covered in Shormann Precalculus, plus a review of Shormann Algebra 2 with Integrated Geometry.

- Lesson 1      Number I: What is Mathematics? - A Brief History of Number - Number Sets and Set Notation - Special Number Types, Exponents
- Lesson 2      Ratio I: Ratio, Proportion, and the Christian Adventure - Rational and Irrational Numbers - Simplifying Fractions - Logarithms (Ratio Numbers) - Ratio Word Problems
- Lesson 3      Algebra I: Expanding - Factoring and Canceling - Exponents - Logarithms
- Lesson 4      Algebra II: Linear Equations - Systems of Linear Equations - Rational Equations

**Week 1 Quiz**

- Lesson 5      Algebra III: Quadratic Equations - Absolute Value Equations - Radical Equations (Square Root) - Exponential Equations - Logarithmic Equations
- Lesson 6      Geometry I: Geometry Fundamentals - Similar Triangles - Geometry in Art and Creation - Geometry in 3D Design
- Lesson 7      Geometry II: Logic Fundamentals - Proof - Syllogisms - Truth Tables
- Lesson 8      Geometry III: Coordinate Geometry - Circle Relationships - Circle Proofs - Non-Euclidean Geometry

**Week 2 Quiz**

- Lesson 9      Analytical Geometry I: Identifying Functions - Evaluating Functions - Operations with Functions - Domain and Range
- Lesson 10     Analytical Geometry II: Linear Inequalities - Linear System Word Problems
- Lesson 11     Analytical Geometry III: Nonlinear Systems - Nonlinear Inequalities - Nonlinear System Word Problems
- Lesson 12     Analytical Geometry IV: Identifying Conic Sections - Conics and Nonlinear Systems - Nonlinear Systems of Inequalities

**Week 3 Quiz**

- Lesson 13     Analytical Geometry V: Piecewise Functions - Domain, Range, and Extrema from Graphs - Conic/Conic Systems

- Lesson 14 Measurement I: Why Standards Matter - Unit Conversions - Rate Conversions and Other Conversions - Arc Lengths and Sectors
- Lesson 15 Measurement II: Length, Area, and Volume Conversions - Perimeter, Area, Surface Area, and Volume - Special Volume Conversions
- Lesson 16 Trigonometry I: Trigonometry Basics - Inverse Trig Functions - Graphing Trig Functions

#### Week 4 Quiz

- Lesson 17 Trigonometry II: Periodicity and Unit Circles - Rectangular to Polar Coordinates - Polar to Rectangular Coordinates - The Parallelogram Law and Resultant Vectors
- Lesson 18 Trigonometry III: Basic Trig Identities - Pythagorean Theorem Applications - Other Right Triangle Applications
- Lesson 19 Calculus I: To Understand Calculus, Just Believe - Limits

#### Week 5 Quiz

- Lesson 20 Calculus II: Calculus is About Rates of Change - Derivative Means Slope - Derivative of  $f(x) = x^2$
- Lesson 21 Calculus III: More on Limits - Derivative Applications - The Integral
- Lesson 22 Statistics I: The Normal Distribution - Measures of Central Tendency - Probability

#### Week 6 Quiz

- Lesson 23 Statistics II: The Least Squares Algorithm for Linear Regressions - The Fundamental Counting Principle and Permutations - Combinations
- Lesson 24 Computer Math I: Pixels, Bits, and the Binary Numeral System - Matrices - Boolean Algebra
- Lesson 25 Computer Math II: Sequences - Series - Sums - Infinite Series

#### Week 7 Quiz

**Exam 1, Week 8:** Practice Exam 1.1 & 1.2, Quarterly Exam 1

- Lesson 26 Sum and Difference Two Cubes; Polynomial Division: Sum and Difference of Two Cubes - Polynomial Division
- Lesson 27 Game Playing with Logarithm Laws; Taking the Logarithm of: Game Playing with Logarithm Laws - Taking the Logarithm of

- Lesson 28 Synthetic Division and the Remainder Theorem; Factor Theorem: Synthetic Division and the Remainder Theorem - Synthetic Division and the Factor Theorem
- Lesson 29 Nonstandard Absolute Value Equations; Finding Roots of Polynomial Equations - Nonstandard Absolute Value Equations - Finding Roots of Polynomial Equations

### Week 9 Quiz

- Lesson 30 Pascal's Triangle and the Binomial Theorem; Distinguishable Permutations: Pascal's Triangle and the Binomial Theorem - Distinguishable Permutations
- Lesson 31 Advanced Radical Equations
- Lesson 32 Polar Form of a Complex Number; More Rate Problems: Polar Form of a Complex Number - More Rate Problems
- Lesson 33 Factorable Trig Equations

### Week 10 Quiz

- Lesson 34 Composite Functions; Products of Complex Numbers: Composite Functions - Products of Complex Numbers
- Lesson 35 Inverse Functions; Inverse Logarithms: Inverse Functions - Inverse Logarithms
- Lesson 36 Modeling of Linear Functions
- Lesson 37 Even and Odd Functions

### Week 11 Quiz

- Lesson 38 Reciprocal Trig Equations; Advanced Trig Equations: Reciprocal Trig Equations - Advanced Trig Equations
- Lesson 39 New Domains, Ranges, and Intervals after Operations; Decomposing Functions: New Domains, Ranges and Intervals from Operations - Decomposing Functions
- Lesson 40 Operations with Numerical Representation of Functions
- Lesson 41 The  $t$ -Test; Factoring Polynomials with Imaginary Roots: The  $t$ -Test - Factoring Polynomials with Imaginary Roots

### Week 12 Quiz

- Lesson 42 Locus Definition of a Circle; Coordinate Geometry Proofs: The Locus Definition of a Circle - Coordinate Geometry Proofs
- Lesson 43 Operations with Graphical Representations of Functions
- Lesson 44 Abstract Rate Problems

Lesson 45 Symbolic Transformations of Functions

### Week 13 Quiz

Lesson 46 Graphical Transformations; Numeric Transformations: Graphical Transformations of Functions - Numerical Transformations of Functions

Lesson 47 Matrix Multiplication

Lesson 48 Nonstandard Representation of Linear Functions

Lesson 49 Locus definition of a Parabola

Lesson 50 Nonstandard and Other Representations of Absolute Value Functions

### Week 14 Quiz

**Exam 2, Week 15:** Practice Exam 2.1 & 2.2, Quarterly Exam 2

Lesson 51 Resolving Fractions into Infinite Series

Lesson 52 Modeling of Absolute Value Functions

Lesson 53 Nonstandard and Other Representations of Quadratic Functions

Lesson 54 Resultant Vectors: Force Applications

### Week 16 Quiz

Lesson 55 Locus definition of an Ellipse

Lesson 56 Modeling of Quadratic Functions

Lesson 57 DeMoivre's Formula, Euler's Formula, and Complex Roots: De Moivre's Formula - Finding Complex Roots

Lesson 58 Infinity as a Limit; Special Limits: Infinity as a Limit - Some Special Limits (That are Also Derivatives)

### Week 17 Quiz

Lesson 59 Nonstandard and Other Representations of Square Root Functions

Lesson 60 Balancing Chemical Equations:

Lesson 61 Modeling of Square Root Functions

Lesson 62 Nonstandard and Other Representations of Degree 3+ Polynomial Functions, Part I

### Week 18 Quiz

Lesson 63 Nonstandard and Other Representations of Degree 3+ Polynomial Functions, Part II

- Lesson 64 Nonstandard and Other Representations of Rational Functions
- Lesson 65 Nonstandard and Other Representations of Exponential Functions
- Lesson 66 Nonstandard and Other Representations of Logarithmic Functions

### **Week 19 Quiz**

- Lesson 67 Modeling of Exponential and Logarithmic Functions
- Lesson 68 Graphing Reciprocal and Inverse Trig Functions
- Lesson 69 Transformations of Trig Functions:

### **Week 20 Quiz**

- Lesson 70 Modeling of Degree 3+ Polynomials
- Lesson 71 Derivatives of Polynomials; Trig Equations of  $n\theta$ : Derivatives of Polynomials - Trig Equations of  $n\theta$
- Lesson 72 Transformations of Reciprocal Trig Functions

### **Week 21 Quiz**

- Lesson 73 Symbolic Forms of Piecewise Functions from Graphs
- Lesson 74 Locus Definition of a Hyperbola
- Lesson 75 Comparing General Forms of Conic and Linear Equations

### **Week 22 Quiz**

#### **Exam 3, Week 23:** Practice Exam 3.1 & 3.2, Quarterly Exam 3

- Lesson 76 Trig Problem Solving
- Lesson 77 Law of Sines
- Lesson 78 Nonstandard Solutions for Conics
- Lesson 79 Law of Cosines
- Lesson 80 More with Inverse Trig Functions

### **Week 24 Quiz**

- Lesson 81 Sum and Difference Trig Identities
- Lesson 82 Double-Angle, Half-Angle, and Tangent Sum and Difference Trig Identities
- Lesson 83 Cramer's Rule; Gas Law Problems



Lesson 84 More Trig Problem Solving; Angular Velocity: Trig Problem Solving - Angular Velocity

### **Week 25 Quiz**

Lesson 85 Partial Fractions; Recurrence Problems: Partial Fractions - Recurrence Problems

Lesson 86 More Modeling of Trig Functions

Lesson 87 Non-Periodic Functions: Damping Functions - The Sinusoidal Fibonacci Function

Lesson 88 Integrals II: Sums of Rectangles

### **Week 26 Quiz**

Lesson 89 Interest Rate, Savings and Debt

Lesson 90 Deriving formulas for infinite series

Lesson 91 Derivatives of sums and differences

Lesson 92 Integrals III: Definite Integrals

### **Week 27 Quiz**

Lesson 93 Integrals IV: Indefinite Integrals

Lesson 94 Taking the 2nd Derivative

Lesson 95 The Product Rule for Derivatives

Lesson 96 The Quotient Rule for Derivatives

### **Week 28 Quiz**

Lesson 97 The Chain Rule for Derivatives

Lesson 98 Using  $f'$  to Find Extrema

Lesson 99 Related rates

Lesson 100 Fundamental Theorem of Calculus

### **Week 29 Quiz**

**Exam 4, Week 30:** Practice Exam 4.1 & 4.2, Quarterly Exam 4

## Shormann Precalculus Assignment Chart

Lesson				
1	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
2	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
3	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
4	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 1</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
5	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
6	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
7	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
8	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 2</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
9	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
10	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
11	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
12	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 3</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
13	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
14	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
15	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
16	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 4</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
17	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
18	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
19	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 5</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
20	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
21	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections

Lesson				
<b>22</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 6</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>23</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>24</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>25</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 7</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>Practice Exam 1.1</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 1.1	<input type="checkbox"/> Corrections	
<b>Practice Exam 1.2</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 1.2	<input type="checkbox"/> Corrections	
<b>Exam 1</b> (Attempt 1)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 1	<input type="checkbox"/> Corrections	
<b>Exam 1</b> (Attempt 2)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 1	<input type="checkbox"/> Corrections	
<b>26</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>27</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>28</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>29</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 9</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>30</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>31</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>32</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>33</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 10</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
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<b>35</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>36</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>37</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 11</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>38</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>39</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections

Lesson				
<b>40</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>41</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 12</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>42</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>43</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>44</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>45</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 13</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>46</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>47</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>48</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>49</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>50</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 14</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>Practice Exam 2.1</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 2.1	<input type="checkbox"/> Corrections	
<b>Practice Exam 2.2</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 2.2	<input type="checkbox"/> Corrections	
<b>Exam 2 (Attempt 1)</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 2	<input type="checkbox"/> Corrections	
<b>Exam 2 (Attempt 2)</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 2	<input type="checkbox"/> Corrections	
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<b>54</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 16</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>55</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
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<b>58</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections

Lesson				
<b>Quiz 17</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>59</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
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<b>62</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 18</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>63</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>64</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>65</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>66</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 19</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>67</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>68</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>69</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 20</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>70</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>71</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>72</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 21</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>73</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
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<b>75</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 22</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>Practice Exam 3.1</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 3.1	<input type="checkbox"/> Corrections	
<b>Practice Exam 3.2</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 3.2	<input type="checkbox"/> Corrections	
<b>Exam 3</b> (Attempt 1)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 3	<input type="checkbox"/> Corrections	
<b>Exam 3</b> (Attempt 2)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 3	<input type="checkbox"/> Corrections	

Lesson				
<b>76</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>77</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>78</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>79</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>80</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 24</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>81</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>82</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>83</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>84</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 25</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>85</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>86</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>87</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>88</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 26</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>89</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>90</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>91</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>92</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 27</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>93</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>94</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>95</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>96</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 28</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>97</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>98</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>99</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections

Lesson				
<b>100</b>	<input type="checkbox"/> Reading	<input type="checkbox"/> Lecture	<input type="checkbox"/> Practice Set	<input type="checkbox"/> Corrections
<b>Quiz 29</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Take Quiz	<input type="checkbox"/> Corrections	
<b>Practice Exam 4.1</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 4.1	<input type="checkbox"/> Corrections	
<b>Practice Exam 4.2</b>	<input type="checkbox"/> Study	<input type="checkbox"/> Practice Exam 4.2	<input type="checkbox"/> Corrections	
<b>Exam 4</b> (Attempt 1)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 4	<input type="checkbox"/> Corrections	
<b>Exam 4</b> (Attempt 2)	<input type="checkbox"/> Study	<input type="checkbox"/> Take Exam 4	<input type="checkbox"/> Corrections	