

How to Use DIVE Algebra $\frac{1}{2}$, 3rd Edition

Quick Start Guide

1. **Parents and Students:** Watch the [Getting Started](#) video.
2. **Critical:** Print the **STUDENT INSTRUCTION SHEET** on page 6.
3. Print the **ASSIGNMENT CHART** on page 7.
4. If your student did not use Saxon Math 87, 2nd or 3rd Edition, complete these ten five-minute facts drills that develop fluency in the essential fraction, decimal, percent, and conversion skills required to learn algebra. [Print drills](#)
5. **Critical:** Use the Timed Method, described under Syllabus on page 2.
6. See the **Weekly Schedule** section to determine the number of homework problems your student should do.

[Time-Saving Tips for Success](#)

Need help accessing or viewing the DIVE video lessons?

[Stream & Download Access Instructions & Tech Support](#)

VHX: Error SystemTimed Out: [Follow these Steps](#)

[CD-ROM Access Instructions & Tech Support](#)

What's Inside?

Syllabus

The DIVE syllabus organizes assignments on a 36 week schedule. There are three types of assignments: lessons, investigations, and tests. At the beginning of the year, you will typically have 5 assignments. As the year progresses and the concepts become more complex, there are only 3 to 4 assignments.

Lessons

Each lesson is made up of three parts: **DIVE Lecture, Saxon Lesson Practice, and Saxon Problem Set**. The DIVE lecture number corresponds with the assigned Saxon lesson for that day. So if you are assigned Lesson 4, you will watch DIVE Lecture 4 and complete Saxon Lesson 4 in the Saxon Student Textbook.

DIVE Video Lectures Ensure Understanding

Did you know the lesson in the Saxon textbook is not the complete lesson? John Saxon designed his program to be taught in a public school classroom by a trained Saxon instructor. The lesson in the book is review for the student. If you read the lesson in the book, you are missing important information. Think of the DIVE lectures as going to class. Don't skip class!

During the lesson students should take notes and work problems with Dr. Shormann, pausing and rewinding as necessary. They should not look at their book. It is too difficult to look at the book, watch the lecture, and take notes. Because Saxon has limited practice on the new concept, Dr. Shormann uses different example problems in his lectures. If a student needs more practice they can do the example problems in the Saxon lesson.

Saxon Lesson Practice Develops Fluency

Next, the Lesson Practice section is completed. This section provides practice on the new concept introduced in the DIVE lecture. Students should review the DIVE lecture as necessary.

Saxon Problem Set Builds Long-term Retention

Finally, the Problem Set section is completed. It provides ample review of previously learned concepts. Saxon's unique method of continual review (not spiral) means the student is either practicing the concept in the mixed practice or building on it in the new lesson. Practicing a concept daily over a long period of time is proven to build long-term retention which increases recall speed and raises exam scores.

Students will often forget a concept in this section. Don't be concerned about this. The important thing is to quickly re-learn the forgotten concept. A lesson reference number is in parentheses next to each problem that indicates which lesson that concept was taught in. When "stuck" on a problem, simply click on that DIVE lesson to quickly re-learn that concept. Better than an answer this gives students the opportunity to apply what was just learned, building long-term retention.

If you “help” your student by showing them how to do the problem correctly, you are removing the opportunity to build retention. This will make math harder. However, if you take the time to re-learn forgotten concepts properly (watch the DIVE lecture), the student will eventually build fluency. This makes math faster and easier.

Occasionally, after re-watching the DIVE lecture, the student may still not understand. Mark the problem wrong and go to the next problem. It will be corrected during the grading step.

Important Note: To teach critical thinking skills, Saxon will include concepts in the homework that have not yet been taught. This teaches the skill of applying what is known to a new problem. Don't be thrown by this. It takes time to develop this skill which is essential to doing well on college entrance exams. These types of questions are only presented in the homework so it will not lower the overall grade.

Saxon Answer Key for Grading Daily Work

Found in the Homeschool Packet, the Answer Key provides the answers (not full solutions) to all Practice and Problem Set questions. At this level, it is recommended students grade their own work as this is part of the learning process. After seeing the correct answer, students can often find their mistake without using any other resources. If not, simply re-watch the corresponding DIVE lecture and try correcting the problem again. Homework should be graded and corrected before starting the next lesson.

Saxon Solutions Manual Provides Step-by-Step Solutions

If, after re-watching the DIVE lecture, the student still does not understand how to work a problem, let them look at the Solutions Manual. Here they will find step-by-step solutions to every Problem Set question and Test question. A parent should keep this booklet and only have the student use it when grading is completed and they have corrected all the problems they can by re-watching the DIVE lectures.

Q&A Email Service with Dr. Shormann

If, after viewing the Solutions Manual, the student still does not understand the concept, email Dr. Shormann at drshormann@gmail.com. Typically the student has missed a foundational concept along the way and he can pinpoint that for you.

Tests

Approximately every 4 lessons there is a test. The tests are in a small booklet called Test Forms, nestled in the Homeschool Packet. The tests are cumulative, which means there are concepts from previous lessons. Students should spend 10-15 minutes studying for the test by working a few practice problems from each new lesson the test covers as well as any concepts they missed on the last test. This information is listed on the syllabus in the Study column.

Recommended Weekly Schedule

In the first part of the course 4 lessons and a test are completed per week. Each lesson has 30 homework problems. However, most DIVE students do not need this much review. Following is a method that works well for reducing the amount of review while maintaining fluency and building long-term retention. If test scores drop below an 80 or 85, this means the student needs more practice and should increase the number of homework problems. To avoid overwhelming your child, do not spend more than an hour or two (depending on age). Regardless of how much of the lesson is completed, stop and pick up where you left off the next day. Eventually, your student will build retention and fluency and complete their lesson daily.

4 Day Sample Schedule

This schedule drops 1 Problem Set per week which means 90 problems are completed per week, instead of 120. Since you watch 2 DIVE lectures on the first day, a little more time is required.

Day 1 Watch DIVE lectures for Lesson 1 and Lesson 2.

Do the Lesson Practice for both lessons 1 & 2.

Skip the Problem Set section for Lesson 1.

Do the Problem Set section for Lesson 2.

Day 2 Watch the DIVE lecture for Lesson 3.

Complete Lesson Practice and Problem Set for Lesson 3.

Day 3 Watch DIVE lecture 4.

Complete Lesson Practice and Problem Set for Lesson 4.

Day 4 Study and take Test

Odd & Even + 5 Schedule

With this schedule students watch the DIVE lecture and complete the Lesson Practice normally. But in the Problem Set section you complete the odd numbered problems on odd numbered lessons and even numbered problems on even lessons. If you have a very strong math student, 15 problems may be enough review. Typically 15 problems do not provide enough review for most students to build fluency. Therefore, we recommend adding 3-5 more problems from the most recent lessons (see the lesson reference number in parentheses next to each problem). For example, if you are on lesson 65, you would do all the odd numbered problems in the Problem Set section. Then circle 3-5 problems that have 65, 64, 63, 62, in parentheses next to the problem. This will add extra review on the most recently learned concepts.

New to DIVE or Saxon Math?

The first 30 lessons of each Saxon text are review and move fairly quickly. However, if you are new to Saxon/DIVE these lessons may not be review. During these lessons, we recommend new students complete one-half lesson per day. For example, you could watch the DIVE lecture, do the Lesson Practice, and complete the first 7-10 problems in the Problem Set section. The next day complete the remaining homework problems then grade and correct. This will allow extra time to learn these concepts and build retention. After the first 30 lessons or so, use the recommended weekly schedule listed above.

Homework & Test Grades

Don't be concerned about the number of missed homework problems. Students are expected to miss or "forget" some of the concepts. However, the continual "reminder" of doing the problem correctly, over a long period of time, will eventually build long-term retention. If all the homework is completed, graded and corrected, the student should receive a 100. We prefer the student grade and correct their daily work as that is part of the learning process.

Test scores are the best indicator of understanding. Tests should be graded by a parent with 1/2 credit given for missed problems in which the student can find their mistake. This gives the student an incentive for showing their work. If test scores drop below an 80 or 85, increase the number of homework problems assigned and slow the pace down. When test scores go up, you can try reducing the number of homework problems.

To calculate a final grade, find the average for each column (sum of all grades divided by the number of grades) add all the grades in one column and divide by the number of grades). Then use the following formula to calculate the final grade.

$$\text{Final Grade} = (\text{Total Homework Average} \times .20) + (\text{Total Test Average} \times .80)$$

Student Instructions for Lessons & Tests

Parents: Read the Syllabus section on page 1. Print this page for daily use by the student.

<p>1. Watch the DIVE lecture. Take brief notes on headings and formulas only. Pause the lecture and solve each example problem on your notes. Do not simply copy the example problems.</p>	<ul style="list-style-type: none"> ● Try to solve the missed problem again. If you can't, skip it and go to the next missed problem.
<p>2. Facts Practice Drills - Set a timer for 5 minutes. Parents record score and time on the drill.</p>	<ul style="list-style-type: none"> ● Repeat these steps to re-learn each missed problem.
<p>3. Lesson Practice Problems (in Saxon Textbook) Do all the problems in the Lesson Practice Section. Re-watch the DIVE lecture, as needed.</p>	<ul style="list-style-type: none"> ● For all problems you still cannot correct, follow these steps:
<p>4. Do the Mixed Practice Problems (Odd/Even + 5) If stuck, follow these steps:</p>	<ul style="list-style-type: none"> ● View the step-by-step solution in the Saxon Solutions Manual
<p>A. Click the DIVE lecture that matches the number in parenthesis next to the question.</p>	<ul style="list-style-type: none"> ● Close the manual and try to solve the problem on your corrections page. If you can't, move to the next one.
<p>B. Fast forward the lecture until you see a similar example problem.</p>	<ul style="list-style-type: none"> ● Repeat these steps for each remaining missed problem.
<p>C. Watch this section of the lecture. Pause the lecture and attempt to work the example problem in the lecture.</p>	<ul style="list-style-type: none"> ● For any problems you cannot solve by using the solutions manual, email Dr. Shormann here
<p>D. Try to solve the homework problem again. If you can't, skip to the next question. Don't spend more than 5-10 minutes "stuck" on a problem. You will relearn in step 6.</p>	<p style="text-align: center;">Tests</p> <p>Study by working a few practice problems from each lesson listed next to the test number on the assignment chart.</p>
<p>E. Repeat these steps to answer all the questions you can for this lesson.</p>	<p>Test should be taken under parent supervision (1 hour limit) and graded by a parent.</p>
<p>5. Parent: Grade the Homework (use Solutions Manual). Put an x next to each wrong problem. Do not correct.</p>	<p>Corrections: Check your work and correct all missed problems you can without using any resources.</p>
<p>6. Students: Start a new page in your notebook titled, "Corrections: Lesson xxx".</p>	<p>Any missed problems corrected this way should be awarded 1/2 credit. For all others:</p>
<p>Correct each missed problem by:</p>	<ul style="list-style-type: none"> ● Re-learn and correct all other missed problems by following steps 4 A - D and
<ul style="list-style-type: none"> ● Check each missed problem for careless mistakes. Correct all you can like this. 	<p>do several problems in the Lesson Practice section for in that lesson.</p>
<ul style="list-style-type: none"> ● For each remaining missed problem that you haven't already, follow steps A - C under #4 above. 	<p>Any problems you can't correct, email Dr. Shormann here</p>

Syllabus for Saxon Algebra 1/2, 3rd Edition

Parents, please watch the introductory lesson with your child. Students should watch the lesson on the DIVE CD before each Saxon lesson. DON'T SKIP class!

Daily Schedule

1. Find Today's Assignment on the DIVE Syllabus

2. Watch the DIVE Lecture

that corresponds with the assigned Saxon lesson. You should take notes and work problems with Dr. Shormann, pausing and rewinding until you understand. You should not be looking at the book during the lesson.

3. Complete Lesson Practice

in the Saxon textbook. Re-watch the DIVE lecture as needed.

4. Complete Problem Set

Re-watch the DIVE lecture (printed in parentheses next to each question) for any questions you forget how to do.

Typically there is a practice problem like the one you are attempting. Then try to do the problem again. If you can't, mark the problem wrong and go to the next problem. You will correct it in the next step.

5. Grade & Correct Homework Daily

Grade homework using the Answer Key in the Homeschool Packet. To correct missed problems:

A. Check your work on all missed problems and see if you can figure out the correct answer.

B. For those you can't, re-watch the DIVE lecture (printed in parentheses next to each problem) and try to correct again. If you can't go to the next missed problem.

C. After correcting all the missed problems you can, use the Solutions Manual to correct any remaining problems.

D. Email Dr. Shormann at drshormann@gmail.com about any problems you cannot correct using the steps above.

At first, this can be a time consuming process. Be patient and eventually you will build long-term retention. Then math will go faster and your test scores will be higher!

TESTS

Study for tests by working a few practice problems from the lessons listed on the syllabus. After a parent grades the test, follow these steps to re-learn and correct missed problems:

1. Try to correct any problems you can without looking at your book, lectures, etc. Problems corrected this way should be awarded 1/2 credit.

2. Look at the answer key then try to solve the problem again.

3. Correct all other problems using the steps listed under step 5 B-D above.

Week #	Lessons	Test	Study *
1	1-5		
2	6-9	1	1-4
3	10-13	2	5-8
4	14-17	3	9-12
5	18-21	4	13-16
6	22-25	5	17-20
7	26-29	6	21-24
8	30-33	7	25-28
9	34-37	8	29-32
10	38-41	9	33-36
11	42-45	10	37-40
12	46-49	11	41-44
13	50-53	12	45-48
14	54-57	13	49-52
15	58-61	14	53-56
16	62-65	15	57-60
17	66-69	16	61-64
18	70-73	17	65-68
19	74-77	18	69-72
20	78-81	19	73-76
21	82-85	20	77-80
22	86-89	21	81-84
23	90-93	22	85-88
24	94-97	23	89-92
25	98-101	24	93-96
26	102-105	25	97-100
27	106-109	26	101-104
28	110-112	27	105-108
29	113-115		
30	116-118	28	109-112
31	119-121	29	113-116
32	122-123 & A		
33	B-D	30	117-120
34	E-G		
35	H-J		
36		31	121-123

Grade Recording Form

Student Name _____ School Year _____

Course Name _____ Final Grade _____

Week	Lessons and Investigations	Homework Average	Test	Test Grade
1	1-5			
2	6-9		1	
3	10-13		2	
4	14-17		3	
5	18-21		4	
6	22-25		5	
7	26-29		6	
8	30-33		7	
9	34-37		8	
10	38-41		9	
11	42-45		10	
12	46-49		11	
13	50-53		12	
14	54-57		13	
15	58-60		14	
16	61-63			
17	64-66		15	
18	67-69		16	
19	70-72		17	
20	73-75			
21	76-78		18	
22	79-81		19	
23	82-84		20	
24	85-87			
25	88-90		21	
26	91-93		22	
27	94-96		23	
28	97-99			
29	100-102		24	
30	103-105		25	
31	106-108		26	
32	109-111			
33	112-114		27	
34	115-117		28	
35	118-120		29	
36			30	
	Homework Average		Test Average	
			Final Grade	