

# DIVE TEACHER GUIDE

For Saxon Advanced Math, 2nd Edition

## Quick Start Guide

1. **Parents and Students:** Watch the [Getting Started](#) video.
2. **Critical:** Print the **STUDENT INSTRUCTION SHEET** on page 5.
3. Print the **ASSIGNMENT CHART** on page 6.
4. **Critical:** Use the Timed Method, described under Syllabus on page 2.
5. See the **Weekly Schedule** section to determine the number of homework problems your student should do.
6. **Required Materials**
  - Drawing Compass
  - Ruler
  - Scientific or Graphing Calculator: [See Recommendations](#)

[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 45 week schedule. There are two types of assignments: lessons and tests. You will have 3 or 4 assignments per week.

## Lessons

Each lesson is made up of three parts: **DIVE Lecture, Saxon Example Problems, 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. So think of the DIVE lectures as going to class. They have important information that is not in the book. Don't skip class! The DIVE lectures will actually save time by ensuring you understand.

During the lecture students should take notes and work problems with Dr. Shormann, pausing and rewinding as necessary. They should not be looking 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 than the ones in the Saxon textbook. If a student needs more practice they can do the example problems in the Saxon lesson.

### **Saxon Example Problems Develops Fluency**

Next, complete the Example Problems from the textbook. Unlike Saxon Algebra 1 and 2, there are no Lesson Practice problems, so do the examples instead. 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 is completed. It provides more than enough 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 has been proven to build long-term retention.

Keep in mind the Problem Set problems are just practice. It is expected that students will "forget" some of the concepts. The key is to re-learn these forgotten concepts. A lesson reference number is in parentheses next to each problem indicates which lesson that concept was taught in. Simply click on that DIVE Lecture to quickly re-learn that concept. Better than an answer, this gives students the opportunity to apply what was just learned, which builds retention.

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

### **Saxon Concept Review Prepares for SAT**

The questions in this section are designed to prepare students for the PSAT, SAT, and ACT exams. If you have any trouble with these questions, you can send an email to Dr. Shormann and he will help you. Be very specific about what you don't understand. If you attempted the problem and don't know where you went wrong, take a picture of it with a smartphone and email it to him. He can pinpoint exactly what you are doing wrong.

### **Saxon Answer Key for Grading Daily Work**

Found in the Home Study 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 watching the DIVE lecture, the student still does not understand 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 lecture.

### **Q&A Email Service with Dr. Shormann**

If, after viewing the Solutions Manual, the student still does not understand the concept, use [this form](#) to contact Dr. Shormann. 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 Home Study 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 lesson the test covers. This information is listed on the syllabus in parentheses next to each test number.

## **Weekly Schedule**

### **Use the Timed Method**

Students should work on math 4 or 5 days per week, for 1.5 - 2 hours max per day. At the end of this time, regardless of how much of the lesson is completed, stop and pick up where you left off the next day. Eventually, the student will build retention and fluency and complete their lessons faster and faster.

Instead of requiring the student to complete a full lesson every day, use the timed method in

red text above. This will ensure the student has time to go back and relearn forgotten concepts, building mastery and fluency.

### **How many problems in the Problem Set should I complete?**

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.

### **Odds or Evens + 5**

With this schedule students 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. For example, if you are on lesson 65, you would do all the odd numbered problems in the Mixed Practice section. Then circle 3-5 problems that are from Lesson 62-65. This will add extra practice 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 and extra time may be required to complete these lessons. It is especially important to use the Timed Method described under Weekly Schedule above. Don't be surprised if it takes 2 or 3 days to complete a lesson during this review section.

## **Homework & Test Grades**

### **Saxon Solutions Manual Step-by-Step Solutions to all homework and tests.**

This book has step-by-step solutions to every homework and test question. A grade recording form is on page 8.

**Homework Grades:** The homework is practice (think piano or baseball practice). Don't be concerned about the number of missed homework problems. Students are expected to miss or "forget" some of the concepts until mastery is achieved. The continual "reminder" of solving the problem in the corrections step, over a long period of time, will build mastery and long-term retention. If all the homework is completed and corrected as instructed on page 5, award a 100. Points can be deducted for sloppy work, not following instructions, etc.

**Test Grades:** Test scores are the only tool that should be used to measure understanding. Concepts are not tested until the student has had time to achieve mastery. Tests should be graded by a parent. Mark each wrong problem but do not correct or mark what they did wrong. Instead, the student should correct each missed problem by following the steps on page 4. Missed problems corrected on paper without using any resources should be awarded 1/2 credit. This gives the student an incentive

for showing their work. Missed problems corrected by re-watching the video lecture, looking at notes, etc, are not awarded extra credit.

If test scores drop below an 80 or 85 (with extra credit for corrected problems), back up 4 lessons and have the student do all the problems in each lesson. When test scores go up, you can try reducing the number of homework problems again.

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.

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

## PSAT, SAT, and ACT Prep Recommendations

[Click here](#) for some recommendations

# Student Instructions

Please print these two pages for use by the student during the lesson.

## 1. Find Today's Assignment on the DIVE Syllabus (next page)

## 2. Watch the DIVE Lecture

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 Example Problems

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 don't know 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 Homestudy Packet. For each wrong answer do this::

- 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. Use [this form](#) to contact Dr. Shormann about any problems you cannot correct using the steps above.

At first, this can be a time consuming process. Use the Timed Method (see page 2) and be patient. Eventually you will build long-term retention and 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, correct all the missed problems.

1. Correct without using any resources -Problems corrected this way are awarded 1/2 credit.
2. Use the Answer Key to correct the remaining missed problems.
3. For all remaining missed problems:
  - A. Re-watch the DIVE lecture (printed in parentheses next to each problem) then try to correct again.Repeat for all remaining missed problems
  - B. Use the Solutions Manual to correct any remaining problems.
  - C. Use [this form](#) to contact Dr. Shormann about any problems you cannot correct using the steps above. Include a pic of any handwritten work you have of the problem.

## DIVE Assignment Chart for Saxon Advanced Math, 2nd Ed.

Week	DIVE/Saxon Lessons	Test		Week	DIVE/Saxon Lessons	Test
1	1-3			24	70-72	17
2	4-6			25	73-74	
3	7-9	1		26	75-76	18
4	10-12	2		27	77-78	
5	13-15			28	79-80	19
6	16-18	3		29	81-82	
7	19-21	4		30	83-84	20
8	22-24	5		31	82-85	
9	25-27			32	86-88	21
10	28-30	6		33	89-91	
11	31-33	7		34	92-94	22
12	34-36	8		35	95-97	23
13	37-39			36	98-100	24
14	40-42	9		37	101-103	
15	43-45	10		38	104-106	25
16	46-48	11		39	107-109	26
17	49-51			40	110-112	27
18	52-54	12		41	113-115	
19	55-57	13		42	116-118	28
20	58-60	14		43	119-121	29
21	61-63			44	122-123	30
22	64-66	15		45	124-125	31
23	67-69	16				

Print and place inside student notebook for easy access.

## DIVE Grade Form for Saxon Advanced Math, 2nd Ed.

Student Name \_\_\_\_\_ School Year \_\_\_\_\_

Course Name \_\_\_\_\_ Final Grade \_\_\_\_\_

Week	DIVE/Saxon Lessons	Homework Average	Test	Test Grade
1	1-3			
2	4-6			
3	7-9		1	
4	10-12		2	
5	13-15			
6	16-18		3	
7	19-21		4	
8	22-24		5	
9	25-27			
10	28-30		6	
11	31-33		7	
12	34-36		8	
13	37-39			
14	40-42		9	
15	43-45		10	
16	46-48		11	
17	49-51			
18	52-54		12	
19	55-57		13	
20	58-60		14	
21	61-63			
22	64-66		15	
23	67-69		16	
24	70-72		17	



25	73-74			
26	75-76		18	
27	77-78			
28	79-80		19	
29	81-82			
30	83-84		20	
31	82-85			
32	86-88		21	
33	89-91			
34	92-94		22	
35	95-97		23	
36	98-100		24	
37	101-103			
38	104-106		25	
39	107-109		26	
40	110-112		27	
41	113-115			
42	116-118		28	
43	119-121		29	
44	122-123		30	
45	124-125		31	