

Course Manual MAT101_09A

J. M. J. SETON HOME STUDY SCHOOL

TEXTS:

Saxon Algebra I, An Incremental Development, Third Edition Textbook Saxon Algebra I, An Incremental Development, Third Edition Solutions Manual

INTRODUCTION:

The Saxon math program has two important aspects. It uses incremental development and continuous practice. Incremental development refers to the division of concepts into small, easy to understand pieces that are taught over several lessons. Thus, a major concept is not taught in one lesson, but rather developed over time. The student is not expected to fully understand the complete concept the first time it is taught, just the incremental aspects of the concept taught in that lesson. Continuous practice means that fundamental skills and concepts are practiced and reviewed throughout the year.

The twin ideas of "incremental development" and "continuous practice" fall together in the educational concept of "distributed learning." Testing has proved that distributed learning is more effective than "massed learning". Looking at material several times in smaller increments makes a more lasting impression on the brain than looking at something once for an extended period of time. So to gain the maximum benefit from this approach, it is important to work at maintaining the schedule of studying one lesson each day and doing all of the problems each day when feasible.

Most parents remember their own high school Math classes and the homework they had to complete once they came home from school. The classes usually lasted

Daily Math Schedule: 1 period in Morning 1 period in Afternoon about 50 minutes and the homework took about that long also. One lesson was studied per day and the next day the class moved on to the next lesson. Math textbooks were written with this schoolwork / homework template in mind. Saxon textbooks are no different. With all this in mind and adapting to the home environment, experience has shown that it is advisable that 2 math periods per day be scheduled, one in the morning and one

in the afternoon or evening, focusing on only one lesson per day.

Each period should be about 50 minutes since experience has demonstrated that to go beyond 50-60 minutes in one session is counterproductive.

Each Period: 50 Minutes

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DAILY LESSON PLAN

1. Read lesson.

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- 2. Work *Practice* problems. Check and redo as necessary.
- 3. Work *Problem Set* problems. Check and redo as necessary.

Have the student read and understand each lesson and then work out the *Practice* problems that follow the lesson for the first period, and then begin working on the *Problem Set* problems until the 50 minutes are up. The student should continue where he left off for the second 50 minute period. Proceed in order from the first lesson to the last; do not skip around.

Be sure any homework problems done incorrectly are corrected and then redone. You will find the complete solutions to each *Practice* problem

and *Problem Set* problem in the separate <u>Solutions Manual</u>. The parent/teacher should consider giving the student the <u>Solutions Manual</u> and having him check his own work with general oversight by the parent/teacher. You may also desire to adopt a *one problem / one solution at a time* checking approach. With this method the student will be able to identify one technical misunderstanding at a time and be able to focus on it immediately and correct it before moving on. In any case the parent/teacher should adjust the approach to what experience informs her actually works for her student.

TO CHECK PROBLEMS

For *Practice* Problems ↓ USE ↓ Solutions Manual

For *Problem Set* Problems ↓ USE ↓ Solutions Manual

TRY TO DO ALL THE PROBLEMS IN EACH LESSON

Saxon strongly

recommends that the student do all of the problems in each lesson set because the course is cumulative, meaning that each lesson will include material from the previous lessons. If the student has demonstrated complete mastery of some of the problem types, however, then the parent/teacher may advise the student to skip them. This should be done with caution as the problem type may appear on any test throughout the year.

In the beginning do not worry about "getting behind." It is more important that the student understand each lesson than it is that he keep on a schedule. However, as time goes by and the parent/ teacher is able to get a sense of the amount of time it takes for a particular student to do each lesson by completing all problems, the parent/teacher may desire to reduce the number of problems from 30 to

SCHEDULING GOAL:

4 lessons and a test per week after the first week

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20 for practical reasons to keep to a realistic scheduling goal of 4 lessons and a test per week. Just be aware of the fact that the more problems the student works out the better he gets.

D.I.V.E. into Math or Saxon Teacher **CD-ROMs**

Consider using the optional *D.I.V.E. into Math* or Saxon Teacher CD-ROMs. Both of these computer aids feature a teacher explaining each lesson throughout the entire textbook. The teacher verbally explains each concept while writing on a blackboard. This "human element" approach is very helpful to students. The Saxon Teacher goes two steps further also explaining solutions to each Practice and Problem Set problem as well as the solutions to each problem on 30 sample tests. The student should view the D.I.V.E. or Saxon Teacher lesson before or in lieu of the textbook lesson before beginning work on the problems following each lesson.

If you have trouble understanding a concept or if test grades start slipping ...

If you have trouble understanding a concept, put your math work away for a while and come back to it later that same day or the next day. If you still do not understand, ask your parent/teacher or call a Seton academic counselor for help. Do not allow yourself to become frustrated. A Seton counselor is just a telephone call away.

If your student is having some small to moderate difficulties, the situation is not serious

in most instances and is correctable with patience, perseverance, and a disciplined approach to whatever problems the student has. In this regard relatives, siblings, or fathers may sometimes, if the circumstances are right, be of help. If you would like to discuss the situation involving your student with a Math Counselor, do not hesitate to contact one.

However, if the student is having great difficulties understanding even *basic* concepts, this may indicate that the level of math he is presently in is beyond his level of comprehension. In this case after consultation with a Math Counselor you may decide to move him back to Algebra $\frac{1}{2}$ or Math 87.

In either case these difficulties usually show up somewhere in the 1st or 2nd Quarter and the sooner they are noticed and dealt with the better for the student.

PROBLEMS? Call or email Seton and ask for a Math Counselor. (540) 636-9990 counselors@setonhome.org

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