

saxon math 87

Saxon Math 87: A Comprehensive Guide to the Curriculum and Its Benefits

saxon math 87 represents a pivotal stage in a student's mathematical journey, bridging elementary concepts with the more abstract thinking required for algebra and beyond. This comprehensive guide delves deep into the Saxon Math 87 curriculum, exploring its core components, pedagogical approach, and the myriad benefits it offers to students. We'll uncover why this program has remained a trusted choice for educators and parents alike, highlighting its structured lessons, incremental practice, and emphasis on mastery. Prepare to gain a thorough understanding of how Saxon Math 87 equips young learners with a robust mathematical foundation, preparing them for future academic success.

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Understanding the Saxon Math 87 Philosophy

The underlying philosophy of Saxon Math, including the 87 level, is built on a foundation of proven teaching strategies that prioritize understanding and retention. Dr. John Saxon believed that students learn best when new concepts are introduced gradually and reinforced consistently. This means that Saxon Math 87 doesn't simply present a new topic and expect students to grasp it immediately. Instead, it weaves new ideas into a familiar framework, allowing students to build upon what they already know. Think of it like building a sturdy house; you wouldn't start with the roof, would you? You build a strong foundation, brick by brick, layer by layer. That's precisely the approach Saxon Math 87 takes with mathematics.

This educational philosophy is deeply rooted in the understanding of how the human brain learns and retains information. It acknowledges that mathematical concepts can be challenging, and that students benefit from repeated exposure and varied practice. The goal is not just to teach a lesson for one day, but to ensure that students internalize the knowledge and can apply it confidently in various contexts. This patient, systematic approach is what sets Saxon Math 87 apart and contributes to its long-standing success in fostering genuine mathematical competence.

Key Components of the Saxon Math 87 Curriculum

Saxon Math 87 is meticulously structured to provide a well-rounded mathematical education. It covers a broad spectrum of topics, ensuring that students develop a comprehensive understanding of pre-algebraic concepts. The curriculum is divided into distinct lessons, each building upon the previous ones, creating a cohesive learning experience.

Lesson Structure and Content

Each Saxon Math 87 lesson typically begins with a concise explanation of a new concept. This introduction is usually brief and to the point, avoiding overwhelming students with excessive detail. Following the introduction, there are practice problems that allow students to immediately apply the newly learned concept. These initial problems are designed to be straightforward, reinforcing the core idea.

The curriculum also includes a significant component of review. This is not just a quick glance back; it's an integral part of the learning process. Saxon Math 87 consistently revisits previously taught concepts, ensuring that they are not forgotten. This continuous reinforcement is crucial for building long-term retention and a solid understanding of mathematical principles. The variety of problems within each lesson, encompassing both new material and review, is a hallmark of the Saxon method.

Problem Sets and Practice

The practice sets in Saxon Math 87 are a cornerstone of its effectiveness. They are designed to be comprehensive, offering a wide range of problems that cover the current lesson's topic as well as concepts from previous lessons. This systematic review is not tedious; rather, it's strategic. By encountering problems that require different approaches and applications of learned skills, students develop a deeper, more flexible understanding of mathematics.

There are typically two main types of problem sets within the daily lessons: the "classwork" problems, which are often done with guidance, and the "homework" problems, which allow for independent practice. This two-pronged approach ensures that students receive immediate support and then have the opportunity to solidify their learning on their own. The sheer volume of practice, spread across many lessons, is what leads to true mastery.

Assessments and Testing

To gauge student progress and identify areas that may need further attention, Saxon Math 87 incorporates regular assessments. These include daily problem sets, which serve as ongoing evaluations, as well as weekly tests and occasional cumulative tests. These assessments are not meant to be intimidating, but rather to provide valuable feedback for both the student and the educator.

The tests in Saxon Math 87 are designed to be comprehensive, reflecting the incremental nature of the curriculum. They typically include problems that cover the most recent material as well as concepts that have been taught in preceding weeks. This ensures that students are not just memorizing facts for a single lesson but are retaining and applying knowledge over time. The data from these assessments can be used to tailor instruction and provide targeted support where needed.

The Incremental Approach: Building Confidence and Mastery

The incremental approach is perhaps the most defining characteristic of the Saxon Math curriculum. This method involves introducing new concepts in small, manageable steps and then revisiting them frequently through practice and review. This slow and steady pace is designed to prevent students from becoming overwhelmed and to build a strong sense of confidence as they achieve success with each step.

Small, Digestible Steps

Imagine learning to ride a bike. You wouldn't just hop on and expect to cycle around the block. You'd start with training wheels, then perhaps have someone hold the seat, and gradually remove the support. Saxon Math 87 applies a similar logic to mathematical concepts. A new idea is broken down into its smallest components, and each component is taught and practiced before moving on to the next. This ensures that no student is left behind due to a lack of understanding of a foundational element.

Constant Reinforcement and Review

The magic of the incremental approach lies in its commitment to review. Saxon Math 87 doesn't just teach a concept once and move on. It weaves that concept back into subsequent lessons, often in different contexts and problem types. This constant reinforcement acts like a powerful memory aid, cementing the learning in the student's mind. It's the repeated exposure that transforms a fleeting understanding into lasting knowledge. This is why students who use Saxon Math 87 often develop a remarkable ability to recall and apply mathematical skills.

Developing Mathematical Fluency

Through this systematic process of introduction, practice, and review, students gradually develop mathematical fluency. Fluency isn't just about speed; it's about the effortless ability to recall facts, apply procedures, and solve problems with confidence. When students are constantly exposed to previously learned material, it becomes second nature. They are able to focus on the higher-level thinking required for more complex problems, rather than struggling with basic computations or concepts. This builds a strong foundation for tackling more advanced mathematics.

Why Choose Saxon Math 87? Benefits for Students

Choosing a math curriculum is a significant decision, and Saxon Math 87 offers a compelling set of benefits that have made it a favored choice for many families and educators. Its structured approach, focus on mastery, and proven track record speak volumes about its effectiveness in

fostering mathematical proficiency.

Building Strong Foundational Skills

One of the primary advantages of Saxon Math 87 is its unwavering commitment to building a strong mathematical foundation. By systematically introducing concepts and providing ample practice, it ensures that students have a solid grasp of the fundamentals before moving on to more complex topics. This means students are less likely to develop gaps in their understanding, which can hinder progress in later grades.

Fostering Confidence and Reducing Math Anxiety

Many students experience math anxiety, but Saxon Math 87's incremental approach is specifically designed to combat this. The constant success students experience through mastering small steps builds confidence and a positive attitude towards mathematics. When students feel capable, they are more willing to tackle challenges, and their overall engagement with the subject increases.

Developing Problem-Solving Skills

While Saxon Math 87 emphasizes procedural fluency, it also cultivates essential problem-solving skills. The varied nature of the practice problems requires students to analyze situations, identify relevant information, and apply learned strategies to find solutions. This process encourages critical thinking and the development of a more analytical mindset, which are invaluable in all areas of life.

Preparation for Future Mathematical Studies

The curriculum is specifically designed to prepare students for the rigors of pre-algebra and algebra. By covering topics such as fractions, decimals, percentages, ratios, proportions, and introductory algebra concepts, Saxon Math 87 provides a smooth transition into higher-level mathematics. Students who have completed Saxon Math 87 are often well-prepared to excel in these subsequent courses.

How Saxon Math 87 Prepares Students for Higher Mathematics

The transition from middle school math to high school mathematics can be a significant leap. Saxon Math 87 plays a crucial role in easing this transition by ensuring students are equipped with the conceptual understanding and procedural fluency necessary for advanced studies. It acts as a vital bridge, making the leap feel more like a confident stride.

Introduction to Algebraic Concepts

Saxon Math 87 introduces fundamental algebraic concepts in a way that is accessible and understandable. Students begin to work with variables, solve simple equations, and understand the properties of numbers. This early exposure to algebraic thinking demystifies the subject and builds a comfort level that is essential for success in pre-algebra and algebra I. Instead of encountering abstract symbols for the first time in a high school classroom, they've already had a gentle introduction.

Mastery of Number Sense and Operations

A deep understanding of number sense and operations is the bedrock of all mathematics. Saxon Math 87 dedicates significant time to reinforcing skills related to whole numbers, fractions, decimals, and integers. This mastery allows students to perform calculations accurately and efficiently, freeing up cognitive resources to focus on more complex problem-solving and conceptual understanding in higher grades. It's like having a well-organized toolkit; you know where everything is and how to use it, making any building project smoother.

Development of Logical Reasoning and Critical Thinking

The problem-solving embedded within the Saxon Math 87 curriculum naturally fosters logical reasoning and critical thinking skills. Students are encouraged to break down problems, identify patterns, and apply deductive reasoning. These cognitive skills are not just important for math; they are transferable to virtually every academic discipline and real-world situation, preparing students for success beyond the math classroom.

Tips for Success with Saxon Math 87

Maximizing the effectiveness of the Saxon Math 87 curriculum involves a few key strategies. By implementing these tips, students can further enhance their learning experience and achieve greater success with the program. It's about working smarter, not just harder, to make the most of this robust curriculum.

Consistency is paramount. Encourage daily engagement with the material, even if it's just for a short period.

Emphasize understanding over speed. While fluency is a goal, ensure the student truly comprehends the 'why' behind the math.

Utilize the teaching support materials. If a student is struggling, review the lesson explanation together or seek additional resources.

Encourage students to show all their work. This not only helps them track their thinking but also aids in identifying errors.

Celebrate small victories. Acknowledge progress and effort to build confidence and maintain motivation.

Don't skip the review problems. These are crucial for long-term retention and mastery.

Make it a positive experience. Approach math with a positive attitude and encourage the student to do the same.

Frequently Asked Questions about Saxon Math 87

Q: What age or grade level is Saxon Math 87 typically used for?

A: Saxon Math 87 is generally designed for students in the 8th grade, or for advanced 7th graders who have completed the previous Saxon math levels. It serves as a crucial stepping stone towards pre-algebra and algebra.

Q: What are the main topics covered in Saxon Math 87?

A: Saxon Math 87 covers a comprehensive range of topics, including number theory, geometry, measurement, fractions, decimals, percentages, ratios, proportions, integers, and introductory algebraic concepts such as variables and simple equations.

Q: How does Saxon Math 87 differ from Saxon Math 7/6 and 8/7?

A: Saxon Math 7/6 is typically for 6th or 7th grade and introduces more advanced concepts than earlier levels. Saxon Math 8/7 is specifically designed for 8th grade and builds directly upon the concepts from 7/6, intensifying the focus on pre-algebraic skills and mathematical reasoning.

Q: Is Saxon Math 87 a good preparation for algebra?

A: Absolutely. Saxon Math 87 is widely recognized for its effectiveness in preparing students for algebra. It systematically introduces algebraic concepts, builds strong number sense, and develops the problem-solving skills needed for success in higher-level mathematics.

Q: What is the typical lesson structure like in Saxon Math 87?

A: Each lesson in Saxon Math 87 typically begins with a brief introduction of a new concept, followed by guided practice and then independent practice problems that include both the new concept and review of previous topics. This incremental approach is a hallmark of the Saxon method.

Q: Are there any specific teaching strategies recommended for Saxon Math 87?

A: Yes, consistency in daily lessons is crucial. Educators and parents are encouraged to emphasize understanding over speed, allow students to show all their work, and consistently utilize the review

problems to reinforce learning.

Q: Can Saxon Math 87 be used effectively for homeschooling?

A: Yes, Saxon Math 87 is a very popular choice for homeschooling due to its clear structure, self-paced nature, and comprehensive teacher's manuals that provide detailed instructions and solutions.

Q: What are the potential benefits of using the incremental approach in Saxon Math 87?

A: The incremental approach helps build student confidence by ensuring mastery of small steps, reduces math anxiety, and promotes long-term retention of mathematical concepts through consistent review and practice.

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