

how to teach yourself math

How to Teach Yourself Math: A Practical Guide to Mastering Mathematics Independently

how to teach yourself math is a question many people ask when they want to gain confidence in a subject that often feels intimidating. Whether you're a student struggling with algebra, a professional looking to refresh your skills, or simply someone curious about numbers, learning math on your own is entirely possible. With the right approach, resources, and mindset, you can develop a strong foundation and even enjoy the process. In this article, we'll explore effective strategies and tips to help you become your own math tutor and conquer mathematical concepts step by step.

Understanding the Basics: Why Self-Teaching Math Works

Before diving into how to teach yourself math, it's important to appreciate why self-directed learning can be so effective. When you take control of your own education, you can tailor the pace and style to fit your needs. This personalized approach helps you focus on areas that challenge you the most without feeling rushed or bored. Moreover, learning independently encourages critical thinking and problem-solving skills, which are vital components of mathematical understanding.

Many successful learners find that breaking down complex topics into manageable chunks and revisiting them regularly improves retention. This method, combined with consistent practice, builds confidence and reduces math anxiety—a common barrier to progress.

Setting Up a Strong Foundation

Start with the Fundamentals

Math is a cumulative subject, which means new concepts often build on previous knowledge. Before advancing to more complicated topics like calculus or statistics, ensure you have a solid grasp of basic arithmetic, fractions, decimals, and percentages. If these areas feel shaky, take the time to review them thoroughly.

Starting from the ground up helps you avoid confusion later and makes learning higher-level math more intuitive. Many online platforms offer free courses or tutorials on foundational math skills, making it easier than ever to get started.

Create a Structured Learning Plan

One of the challenges of teaching yourself math is maintaining consistency and organization. Without a formal class schedule, it's easy to procrastinate or jump between topics randomly. To avoid this, create a study plan that outlines:

- Which topics to cover each week
- Specific goals for each study session
- Time blocks dedicated exclusively to math practice

Having a roadmap not only keeps you accountable but also provides a sense of accomplishment as you check off completed sections. Remember to include regular review sessions to reinforce what you've learned.

Utilizing Effective Resources

Books, Online Courses, and Videos

When figuring out how to teach yourself math, choosing the right learning materials is crucial.

Textbooks provide detailed explanations and practice problems, which are great for deep dives into concepts. Look for books that explain ideas clearly and include exercises with solutions.

In addition to books, online courses on platforms like Khan Academy, Coursera, and edX offer structured lessons and interactive quizzes. These resources often incorporate visual aids and real-world applications, making abstract ideas more relatable.

YouTube channels dedicated to math education can also supplement your studies. Videos help by showing step-by-step problem-solving methods and can clarify topics you find confusing.

Math Tools and Apps

Don't underestimate the power of technology in your self-study journey. Calculators, graphing software, and mobile apps can enhance your understanding by allowing you to experiment with numbers and visualize problems. For instance, apps that provide instant feedback on practice questions can help you identify mistakes and learn from them immediately.

Some popular tools include Wolfram Alpha for computation, GeoGebra for geometry, and Photomath for scanning and solving equations. Using these resources smartly can accelerate your learning and keep you engaged.

Developing Good Study Habits

Practice Regularly and Actively

Math is a skill best learned by doing. Passive reading or watching tutorials won't be enough to master the subject. Instead, work through problems actively—write out solutions, explore alternative methods, and challenge yourself with increasingly difficult questions.

Aim to practice consistently, even if it's just 20–30 minutes a day. Frequent exposure helps reinforce concepts and builds mental agility. When you encounter errors, take the time to understand your mistakes rather than skipping ahead.

Engage with the Math Community

Learning math on your own doesn't mean you have to go it completely solo. Joining online forums like Stack Exchange, Reddit's [r/learnmath](#), or specialized Facebook groups can connect you with peers and experts. These communities provide support, answer questions, and share useful resources.

Participating in discussions or even explaining concepts to others can deepen your understanding. Teaching is often one of the best ways to solidify knowledge.

Overcoming Challenges and Staying Motivated

Dealing with Frustration

It's normal to feel stuck or frustrated when tackling difficult math problems. Don't let these moments discourage you. Instead, take breaks, try approaching the problem from a different angle, or seek help from available resources. Remember that persistence is key, and every mathematician has faced hurdles.

Celebrate small victories along the way to maintain a positive mindset. Progress might be slow at times, but steady effort leads to mastery.

Relate Math to Real-Life Applications

Sometimes math feels abstract and disconnected from everyday life, which can sap motivation. To make learning more engaging, find ways to relate mathematical concepts to real-world scenarios. For example, budgeting involves arithmetic and percentages, while understanding sports statistics requires knowledge of averages and probabilities.

Connecting math to your interests not only makes studying more enjoyable but also demonstrates its practical value.

Tracking Your Progress and Adapting Your Approach

As you continue learning, it's important to monitor your progress honestly. Regularly test yourself with quizzes or exercises that cover multiple topics. Reflect on which areas you've improved in and which need more attention.

Be flexible with your study plan. If a particular method or resource isn't working, don't hesitate to try something different. Learning math is a personal journey, and adapting your approach can lead to

better outcomes.

Teaching yourself math might seem daunting at first, but with patience, the right tools, and consistent effort, it becomes an achievable and rewarding goal. By building a strong foundation, leveraging quality resources, cultivating effective study habits, and staying motivated, you can unlock the world of mathematics on your own terms. Whether you want to solve complex equations, understand data analysis, or simply gain confidence in numbers, the path to self-taught math success is within your reach.

Frequently Asked Questions

What are the best resources for teaching yourself math?

Some of the best resources for teaching yourself math include online platforms like Khan Academy, Coursera, and MIT OpenCourseWare, as well as textbooks such as 'Principles of Mathematics' by Allendoerfer and Oakley and 'How to Prove It' by Daniel Velleman.

How can I create an effective self-study math plan?

To create an effective self-study math plan, start by setting clear goals, identify the topics you need to learn, allocate regular study time, use a mix of textbooks and online resources, practice problems daily, and regularly review past material to reinforce understanding.

What are some tips for staying motivated while teaching yourself math?

Staying motivated can be achieved by setting achievable milestones, rewarding yourself for progress, joining online math communities for support, tracking your improvements, and connecting math learning to real-life applications to maintain interest.

How important is practicing problems when teaching yourself math?

Practicing problems is crucial when teaching yourself math because it helps reinforce concepts, improves problem-solving skills, and highlights areas where you need further study. Consistent practice leads to better retention and understanding.

Can I teach myself advanced math topics without a formal background?

Yes, you can teach yourself advanced math topics without a formal background by building a strong foundation in basic concepts first, using beginner-friendly resources, and progressing gradually to more complex topics while seeking help from online forums or study groups when needed.

How do I know if I'm understanding math concepts correctly when studying alone?

You can verify your understanding by attempting a variety of problems, explaining concepts in your own words, using online quizzes, seeking feedback in math forums, and comparing your solutions with worked examples or solutions provided in textbooks.

What role do math communities and forums play in self-learning math?

Math communities and forums provide valuable support by allowing you to ask questions, share knowledge, get feedback, discover new resources, and stay motivated through interaction with others who share your interest in learning math.

How can I develop problem-solving skills while teaching myself math?

To develop problem-solving skills, practice a variety of problems regularly, learn different problem-solving strategies, analyze worked examples, reflect on mistakes, and challenge yourself with puzzles or competitions to apply concepts creatively.

What is the best way to review and retain math knowledge during self-study?

The best way to review and retain math knowledge is through spaced repetition, summarizing key concepts, solving mixed problem sets, teaching others what you've learned, and periodically revisiting previous topics to reinforce memory and understanding.

Additional Resources

****Mastering Mathematics Independently: A Thorough Guide on How to Teach Yourself Math****

how to teach yourself math is a question that resonates with many learners seeking to conquer this fundamental yet often intimidating subject without the traditional classroom setting. Whether driven by necessity, curiosity, or professional demands, self-teaching math requires strategic approaches, disciplined study habits, and access to quality resources. This article explores effective methodologies, tools, and mindsets essential for anyone embarking on the journey to learn mathematics independently.

Understanding the Challenges of Self-Learning Math

Mathematics is unique compared to many other subjects because it builds cumulatively; concepts learned early on serve as the foundation for more advanced topics. This incremental nature means that gaps in understanding can quickly widen if not addressed promptly. Furthermore, math often involves abstract thinking and problem-solving skills that develop through practice and exposure to various problem types.

One of the primary hurdles in teaching yourself math is maintaining motivation and discipline without the external structure of classes or instructors. Additionally, accessing accurate explanations and feedback on problem-solving methods can be difficult when learning solo. Recognizing these

challenges early helps frame an effective learning strategy that compensates for potential obstacles.

Key Strategies for Teaching Yourself Math

1. Establish a Strong Foundation

Before advancing to complex topics such as calculus or linear algebra, it is crucial to ensure a solid grasp of fundamental concepts like arithmetic, fractions, percentages, and basic algebra. These areas form the building blocks for all higher-level mathematics. Starting with a thorough review of these basics prevents confusion later and accelerates learning.

2. Set Clear, Measurable Goals

Goal-setting is a critical component of any self-directed learning. Define what you want to achieve—whether it is mastering a specific math area, passing a standardized test, or applying math to a professional field. Break down these objectives into weekly or monthly targets, such as completing a chapter, solving a set number of problems, or watching instructional videos.

3. Utilize Quality Resources

The digital age offers an abundance of materials for self-learners. However, not all resources are equally effective or reliable. Selecting textbooks renowned for clarity, such as those by authors like Gilbert Strang or Paul Halmos for linear algebra or Stewart for calculus, can provide structured learning paths.

Online platforms like Khan Academy, Coursera, and MIT OpenCourseWare offer free courses with

video lectures, exercises, and quizzes that mimic classroom instruction. Interactive tools, such as math problem solvers and graphing calculators, enhance understanding by providing immediate feedback and visual representations.

4. Practice Regularly and Variedly

Mathematics is a skill honed through practice. Repeated exposure to diverse problem types reinforces concepts and develops problem-solving agility. Instead of passively reading solutions, actively attempt problems first, then study solutions to identify errors or alternative methods.

Incorporating a mix of problem difficulties—from straightforward exercises to challenging puzzles—helps deepen comprehension and prepares learners for real-world applications or examinations.

5. Embrace a Growth Mindset and Resilience

Many learners encounter frustration when facing complex mathematical problems. Cultivating a growth mindset—the belief that abilities can be developed through effort—is vital. Mistakes should be viewed as learning opportunities rather than failures.

Engaging with online forums such as Stack Exchange or Reddit's [r/learnmath](#) community allows learners to ask questions, share insights, and gain encouragement, mitigating feelings of isolation.

Effective Tools and Resources for Self-Teaching Math

Textbooks and Workbooks

Traditional textbooks remain indispensable for structured learning. Popular series like “Art of Problem Solving” provide rigorous content suitable for advanced learners, while Schaum’s Outlines offer concise explanations and extensive practice problems.

Online Learning Platforms

- **Khan Academy:** Covers a wide range of topics with interactive exercises and video tutorials.
- **Coursera and edX:** Host university-level courses with assignments and peer interaction.
- **Brilliant:** Focuses on problem-solving and conceptual understanding through interactive lessons.

Mathematical Software and Calculators

Tools such as Wolfram Alpha, GeoGebra, and Desmos assist in visualizing problems, verifying solutions, and exploring mathematical concepts dynamically. These applications bridge the gap between theoretical knowledge and practical understanding.

Building a Sustainable Study Routine

Consistency is paramount when learning math independently. Creating a realistic schedule that allocates dedicated time for study each day helps maintain momentum. Incorporating short breaks and alternating between different math topics can prevent burnout and keep the mind engaged.

Tracking progress through journals or digital apps allows learners to reflect on their understanding and adjust strategies accordingly. Setting milestones and rewarding achievements can also boost motivation.

Comparing Self-Teaching Math With Traditional Learning

While classroom instruction provides direct access to expert guidance and peer interaction, self-teaching offers flexibility and personalized pacing. Independent learners can tailor their curriculum to specific interests and revisit challenging topics without pressure.

However, self-learners must compensate for the absence of immediate feedback by seeking external validation through online communities, tutors, or timed assessments. This proactive approach helps maintain accuracy and deepens conceptual clarity.

The Role of Technology in Modern Math Education

Technology has revolutionized how individuals approach math education. Adaptive learning platforms adjust difficulty based on performance, ensuring efficient mastery of concepts. Video tutorials break down complex topics into digestible segments, catering to various learning styles.

Moreover, gamification elements in apps transform math practice into engaging activities, reducing anxiety and increasing retention. The integration of artificial intelligence in tutoring systems is also emerging as a powerful aid for personalized learning paths.

Common Pitfalls and How to Avoid Them

- ****Skipping Fundamentals:**** Attempting advanced topics without a clear understanding of basics leads to confusion. Regularly revisit foundational concepts.
- ****Passive Learning:**** Merely watching videos or reading without active problem-solving limits skill development. Engage actively with exercises.
- ****Neglecting Review:**** Failing to revisit previously learned material causes forgetting. Schedule

periodic reviews to reinforce memory.

- **Ignoring Mistakes:** Overlooking errors prevents progress. Analyze mistakes thoroughly to understand underlying misconceptions.

Recommended Practices for Overcoming Challenges

- Join study groups or online forums for collaboration and support.
- Use spaced repetition techniques to enhance long-term retention.
- Balance conceptual learning with applied problem-solving.
- Seek external assessments to benchmark progress.

Embarking on the quest to teach yourself math is undoubtedly challenging but equally rewarding. By leveraging strategic planning, reputable resources, and embracing perseverance, learners can demystify mathematics and unlock its vast potential in academia, career, and everyday problem-solving.

How To Teach Yourself Math

how to teach yourself math: Winning at Math Paul D. Nolting, 2002 Every student must pass math courses to graduate. Doing well in math can both increase your career choices and allow you to graduate. Winning at Math will help you improve your math grades -- quickly and easily. The format of Winning at Math has been revised to make it easier to read, and it contains much more proven math study skills techniques. The chapter on test anxiety has been expanded to assist students with math anxiety not just test anxiety. -- From publisher's description

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to account for innumeracy's lifelong consequences, from not understanding statistics used in science and news to difficulty managing finances. The Art of Learning Math is a journey into what makes math meaningful. It takes the reader through the developmental stages of learning math, from infancy to adulthood. It weaves stories, examples, research references, reasons, the arts, and evolutionary understandings to make it relevant and comprehensible to readers. It also provides concrete, actionable tools to help the reader be successful in their endeavor, whether that is to educate groups of children, their own children, or themselves.

how to teach yourself math: Teach Yourself Computer Programming Richard Murray-Shelley, 1967

how to teach yourself math: Teaching Yourself To Teach Selena Watts, 2020-08-23 A Teacher's Guide to Inspire, Motivate, and Provide the Best Learning Experience For Your Students. Are you a teacher who struggles with classroom management and lesson planning? Alternatively, are you considering becoming a teacher and are looking to develop the essential teaching skills? A lot of teachers claim teaching is the most challenging, and at the same time, the most rewarding job in the world. Not many get the chance to shape young minds and influence people to achieve great things in life. Teachers do... but it's a hard road to travel on. Most people don't even realize the challenges teachers face every day. From lesson planning to dealing with problematic students and overbearing parents, teachers have to juggle various responsibilities all at once. The biggest one, of course, is providing the best possible learning experience for students. This particular task is extremely difficult--you have to be able to motivate and inspire a certain group of people every day while maintaining authority and making sure they understand the material. It's no wonder then, that many teachers feel like they've given everything they have and struggle to keep their students interested. The education system doesn't help much with this particular problem--most of the time, you simply get a curriculum and they send you on your own way. If you're a freelance teacher, you don't even get that. It's a blessing and a curse. On the one hand, this cold-hearted system is hindering education in general, and leaving teachers to their own means can backfire and have serious sociological consequences. But on the other hand, the system provides a crazy amount of freedom for teachers to do their own thing and be creative and versatile in their jobs. This, of course, puts an enormous amount of pressure on teachers, especially young, new teachers who are only starting to find their own teaching style. With the emergence of online classrooms and various virtual educational tools, teaching has become an art, and the teaching skills that were once valued before simply don't compare in this new, digital world. Luckily, some of those skills are still considered essential and can be applied to both physical and virtual classrooms. In Teaching Yourself to Teach, you will discover: 8+ types of learners that will help you appraise your students and come up with the best teaching strategies for each one of them Blended learning techniques that allow you to incorporate digital tools in your real-life classrooms to enhance the learning experience A guidebook on classroom management, that will help even the most inexperienced teacher establish authority from the start Numerous tips and strategies for boosting motivation and inspiring students to excel in your class, even if you have some that are currently struggling Simple lesson planning instructions, carefully designed to make sure your classes are of the highest educational quality Tips on how to deal with problematic students and help them overcome their various learning issues And much more. Even if you're an excellent teacher, adored by both students and parents, it never hurts to upgrade your skills to improve and enrich your teaching style. As a teacher, all you want is for your students to be passionate about learning and realize the potential you know they're capable of reaching. If you want to develop crucial teaching skills and discover how to plan and execute the best classes possible, then scroll up and click the "Add to Cart" button right now.

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also weaved into each story to spark your child's curiosity about the world. The set comes with bonus fun and interactive elements to reinforce your child's learning of Math concepts! This set includes:

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how to teach yourself math: **Strengths-Based Teaching and Learning in Mathematics** Beth McCord Kobett, Karen S. Karp, 2020-02-27 This book is a game changer! Strengths-Based Teaching and Learning in Mathematics: 5 Teaching Turnarounds for Grades K- 6 goes beyond simply providing information by sharing a pathway for changing practice. . . Focusing on our students' strengths should be routine and can be lost in the day-to-day teaching demands. A teacher using these approaches can change the trajectory of students' lives forever. All teachers need this resource! Connie S. Schrock Emporia State University National Council of Supervisors of Mathematics President, 2017-2019 NEW COVID RESOURCES ADDED: A Parent's Toolkit to Strengths-Based Learning in Math is now available on the book's companion website to support families engaged in math learning at home. This toolkit provides a variety of home-based activities and games for families to engage in together. Your game plan for unlocking mathematics by focusing on students' strengths. We often evaluate student thinking and their work from a deficit point of view, particularly in mathematics, where many teachers have been taught that their role is to diagnose and eradicate students' misconceptions. But what if instead of focusing on what students don't know or haven't mastered, we identify their mathematical strengths and build next instructional steps on students' points of power? Beth McCord Kobett and Karen S. Karp answer this

question and others by highlighting five key teaching turnarounds for improving students' mathematics learning: identify teaching strengths, discover and leverage students' strengths, design instruction from a strengths-based perspective, help students identify their points of power, and promote strengths in the school community and at home. Each chapter provides opportunities to stop and consider current practice, reflect, and transfer practice while also sharing · Downloadable resources, activities, and tools · Examples of student work within Grades K-6 · Real teachers' notes and reflections for discussion It's time to turn around our approach to mathematics instruction, end deficit thinking, and nurture each student's mathematical strengths by emphasizing what makes them each unique and powerful.

how to teach yourself math: Answers to Your Biggest Questions About Teaching Secondary Math Frederick L. Dillon, Ayanna D. Perry, Andrea Cheng, Jennifer Outzs, 2022-03-22 Let's face it, teaching secondary math can be hard. So much about how we teach math today may look and feel different from how we learned it. Teaching math in a student-centered way changes the role of the teacher from one who traditionally delivers knowledge to one who fosters thinking. Most importantly, we must ensure our practice gives each and every student the opportunity to learn, grow, and achieve at high levels, while providing opportunities to develop their agency and authority in the classroom which results in a positive math identity. Whether you are a brand new teacher or a veteran, if you find teaching math to be quite the challenge, this is the guide you want by your side. Designed for just-in-time learning and support, this practical resource gives you brief, actionable answers to your most pressing questions about teaching secondary math. Written by four experienced math educators representing diverse experiences, these authors offer the practical advice they wish they received years ago, from lessons they've learned over decades of practice, research, coaching, and through collaborating with teams, teachers and colleagues—especially new teachers—every day. Questions and answers are organized into five areas of effort that will help you most thrive in your secondary math classroom: How do I build a positive math community? How do I structure, organize, and manage my math class? How do I engage my students in math? How do I help my students talk about math? How do I know what my students know and move them forward? Woven throughout, you'll find helpful sidebar notes on fostering identity and agency; access and equity; teaching in different settings; and invaluable resources for deeper learning. The final question—Where do I go from here?— offers guidance for growing your practice over time. Strive to become the best math educator you can be; your students are counting on it! What will be your first step on the journey?

how to teach yourself math: *Mathematical Metaphors, Memories, and Mindsets* Carmen M. Latterell, Janelle L. Wilson, 2020-04-10 United States' students continue to have difficulties with the subject of mathematics. Sometimes it is believed that students aren't smart enough to master mathematics or that mathematics is just too difficult for all but the chosen few. This book offers an alternative explanation: Students' difficulties in mathematics can best be understood and explained social scientifically. That is, Learning Theories, Agents of Socialization, and more generally, cultural and social milieu, are relevant in trying to understand individuals' ideas about mathematics. The book begins by providing an overview of the current status in mathematics education. Popular cultural portrayals of mathematics and mathematicians are examined. The book, then, delves deeper into how students perceive mathematics and mathematicians by examining how students view mathematicians, how students define mathematics, and what themes emerge from students' mathematical autobiographies and their metaphors. The book describes a semantic differential, in an effort to ascertain the meanings of math that people hold and shows the different patterns of responses among various groups of people. Finally, the book delves into mathematical mindsets, a current approach to understanding mathematical identities, as well as success and failure in mathematics.

how to teach yourself math: *Teaching and Learning High School Mathematics* Charlene E. Beckmann, Denisse R. Thompson, Rheta N. Rubenstein, 2009-11-02 Too many high school students, faced with mathematics in courses at the level of algebra and beyond, find themselves

struggling with abstract concepts and unwilling to pursue further study of mathematics. When students curtail their course taking in mathematics, they may be impacting their college and career options. Thus, high school mathematics teachers have the responsibility to help students recognize the value and importance of mathematics while also designing instruction that makes mathematics accessible to all students. Ball and Bass (2000), as well as other mathematics educators, have recognized that mathematics teachers not only need to know mathematics content and mathematics pedagogy (i.e., teaching strategies) but they also need to know how these ideas are integrated. This mathematical knowledge for teaching is the knowledge that teachers of mathematics need and it differs from the knowledge that research or applied mathematicians must know. This text is designed to provide teachers with insights into this mathematical knowledge for teaching. Teaching and Learning High School Mathematics is likely different from many other texts that you have used. It integrates both content and pedagogy to help you develop and build your own understanding of teaching. The text is designed to help you develop “deep conceptual understanding of fundamental mathematics” (Ma 1999) so that you are able to approach mathematics from multiple perspectives with many tools. Such flexibility in teaching is essential if teachers are to help all students become mathematically proficient. Throughout this book, you are encouraged to work in cooperative teams. This strategy is designed to help you develop a mathematics learning community and build a professional network that will be a valuable resource during your professional career. Hopefully, you will experience the benefits of engaging in rich mathematical discussions with peers and consider how to encourage such learning environments in your own classrooms. Lesson planning is another element pervasive throughout this text. To help teachers plan for effective student-centered lessons, the Question Response Support (QRS) Guide is introduced in Lesson 1.1 and used throughout the remainder of the lessons. The QRS Guide is a tool on which teachers may record tasks or questions (Q) for students, expected and observed student responses (R), and teacher support (S) in the form of additional “just enough” questions to support students in their progress on the task. In each unit, teachers expand their repertoire of teaching and learning elements and strategies and incorporate these elements as they plan additional lesson segments. In Unit 4 lesson planning is formally introduced as teachers put together elements from previous units into complete, cohesive lesson plans.

how to teach yourself math: *The Best Writing on Mathematics 2018* Mircea Pitici, 2018-12-04
The year’s finest mathematical writing from around the world This annual anthology brings together the year’s finest mathematics writing from around the world. Featuring promising new voices alongside some of the foremost names in the field, *The Best Writing on Mathematics 2018* makes available to a wide audience many pieces not easily found anywhere else—and you don’t need to be a mathematician to enjoy them. These essays delve into the history, philosophy, teaching, and everyday aspects of math, offering surprising insights into its nature, meaning, and practice—and taking readers behind the scenes of today’s hottest mathematical debates. James Grime shows how to build subtly mischievous dice for playing slightly unfair games and Michael Barany traces how our appreciation of the societal importance of mathematics has developed since World War II. In other essays, Francis Su extolls the inherent values of learning, doing, and sharing mathematics, and Margaret Wertheim takes us on a mathematical exploration of the mind and the world—with glimpses at science, philosophy, music, art, and even crocheting. And there’s much, much more. In addition to presenting the year’s most memorable math writing, this must-have anthology includes an introduction by the editor and a bibliography of other notable pieces on mathematics. This is a must-read for anyone interested in where math has taken us—and where it is headed.

how to teach yourself math: *Teach Yourself Visual Basic* Bob Albrecht, Karl Albrecht, 1996
This book is written so that anyone can learn Visual Basic, including new and experienced programmers. The book uses a mastery-learning approach, so that in just 15 minutes a day anyone can learn to program in Visual Basic. Real-world examples include calculating the cost of delaying credit card payments and managing no-load mutual funds.

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