

introduction to geometry by richard rusczyk

Introduction to Geometry by Richard Rusczyk: Unlocking the Beauty of Shapes and Logic

introduction to geometry by richard rusczyk serves as a gateway for students and enthusiasts eager to delve into the world of shapes, angles, and spatial reasoning. If you've ever wondered how geometry can be both a practical tool and an elegant branch of mathematics, Richard Rusczyk's approach offers a fresh, insightful perspective that transforms learning into an engaging adventure. Known for his work with the Art of Problem Solving (AoPS) community, Rusczyk has crafted materials that break down complex concepts into digestible, thought-provoking lessons.

In this article, we'll explore the key ideas behind introduction to geometry by Richard Rusczyk, uncover what makes his teaching style stand out, and provide some practical tips for mastering geometry using his resources. Whether you're a student preparing for math competitions or someone simply interested in understanding the fundamentals of geometry, this guide will illuminate the path.

Who is Richard Rusczyk and Why His Geometry Approach Matters

Richard Rusczyk is a mathematician, educator, and founder of the Art of Problem Solving. His philosophy centers around deep conceptual understanding rather than rote memorization. In the realm of geometry, this means emphasizing reasoning skills, problem-solving strategies, and the underlying logic that governs geometric principles.

Unlike traditional textbooks that might focus heavily on formulas and theorems in isolation, Rusczyk's introduction to geometry weaves these elements into a cohesive narrative. His materials encourage students to think critically, visualize problems, and connect disparate ideas. This approach has resonated particularly well with students preparing for competitions like AMC (American Mathematics Competitions) and AIME (American Invitational Mathematics Examination), where creative problem solving is key.

Core Concepts Covered in Introduction to Geometry by Richard Rusczyk

Rusczyk's introduction to geometry covers a broad spectrum of foundational topics, ensuring students build a robust understanding that can be applied across various math challenges.

Fundamentals of Geometric Shapes and Figures

At the heart of geometry lies the study of shapes—points, lines, angles, polygons, circles, and solids. Rusczyk's lessons begin here, emphasizing precise definitions and properties. Understanding these

basics thoroughly ensures learners can analyze more complex problems confidently.

Angle Relationships and Proof Techniques

One distinctive feature of Rusczyk's approach is the early introduction of proof-based reasoning. Students learn not only to calculate angles but also to justify their answers through logical arguments. This builds a solid foundation in mathematical rigor and nurtures analytical thinking.

Triangles and Their Properties

Triangles are the workhorses of geometry. Through careful exploration of types of triangles, congruence criteria, and special points like the centroid and incenter, Rusczyk guides students to appreciate the richness of these seemingly simple shapes.

Circles and Their Theorems

From tangent lines to chord properties, Rusczyk's introduction to geometry includes a detailed look at circles. His method encourages learners to visualize and prove theorems rather than memorize them, deepening conceptual clarity.

Coordinate Geometry and Transformations

Bridging algebra and geometry, coordinate geometry is an essential aspect of Rusczyk's curriculum. Students learn how to represent geometric figures on the Cartesian plane and explore transformations such as translations, rotations, and reflections.

Why Students Love Rusczyk's Geometry Resources

The popularity of Richard Rusczyk's geometry materials stems from several key strengths that address common challenges students face.

Interactive Problem-Solving Focus

Instead of passively reading about theorems, learners engage with challenging problems that require applying concepts in creative ways. This hands-on approach helps solidify understanding and builds confidence.

Clear Explanations with Step-by-Step Guidance

Rusczyk's writing style is conversational and approachable, making complex ideas accessible without oversimplifying. Step-by-step solutions guide learners through the reasoning process, modeling how to tackle unfamiliar problems.

Emphasis on Understanding Over Memorization

Many students struggle with geometry because they rely too heavily on memorizing formulas and rules. Rusczyk flips this paradigm by encouraging students to discover why formulas work, leading to longer-lasting comprehension.

Preparation for Math Competitions and Beyond

For students aiming to excel in competitions, Rusczyk's introduction to geometry provides a competitive edge. The problems and concepts are carefully curated to build skills needed for contests, while also serving as a strong foundation for higher-level math courses.

Tips for Getting the Most Out of Introduction to Geometry by Richard Rusczyk

Whether you're a self-learner or a classroom student, approaching Rusczyk's geometry materials with the right mindset can boost your progress.

- **Take Time to Visualize:** Geometry is inherently visual. Draw diagrams, use tools like rulers and protractors, and try to imagine the shapes as you read.
- **Work Through Problems Actively:** Don't just read solutions—try each problem on your own first. Struggling with a problem is a key part of learning.
- **Review and Reflect:** After solving a problem, review the solution carefully. Reflect on why each step was taken and how it connects to broader concepts.
- **Use Supplementary Resources:** Complement your study with online forums, AoPS community discussions, and geometry videos to deepen your understanding.
- **Practice Consistently:** Regular practice is essential. Even short daily sessions help reinforce concepts and improve problem-solving speed.

The Role of AoPS Community in Enhancing Geometry Learning

A unique aspect of Richard Rusczyk's contribution to geometry education is the vibrant AoPS community he helped build. This online platform offers students the chance to collaborate, discuss challenging problems, and receive feedback from peers and mentors.

Joining the AoPS forums while studying introduction to geometry by Richard Rusczyk can enrich the learning experience by exposing students to diverse problem-solving strategies and fostering a sense of camaraderie. The community environment encourages curiosity and resilience, both vital traits for mastering geometry.

How Introduction to Geometry by Richard Rusczyk Prepares Students for Advanced Math

Beyond immediate problem-solving skills, Rusczyk's introduction to geometry lays groundwork for more advanced mathematical fields. The logical reasoning, proof techniques, and spatial intuition developed here are invaluable in calculus, linear algebra, and beyond.

Students trained with these materials often find themselves better equipped to handle abstract concepts and complex proofs in higher education settings. Moreover, the problem-solving mindset cultivated through Rusczyk's method nurtures creativity and persistence, qualities that transcend math and apply to diverse academic and professional challenges.

Exploring introduction to geometry by Richard Rusczyk is more than just learning about angles and shapes—it's about cultivating a way of thinking that embraces challenges and values understanding. For anyone passionate about math, this journey is both rewarding and transformative.

Frequently Asked Questions

Who is the author of 'Introduction to Geometry'?

'Introduction to Geometry' is authored by Richard Rusczyk.

What topics are covered in 'Introduction to Geometry' by Richard Rusczyk?

The book covers fundamental topics in geometry including points, lines, angles, triangles, circles, polygons, coordinate geometry, and basic proof techniques.

Is 'Introduction to Geometry' suitable for beginners?

Yes, 'Introduction to Geometry' is designed for students who have a basic understanding of math and

want to develop strong problem-solving skills in geometry.

Does 'Introduction to Geometry' include practice problems?

Yes, the book includes numerous challenging problems with detailed solutions to help students deepen their understanding.

How does Richard Rusczyk's 'Introduction to Geometry' differ from standard textbooks?

Rusczyk's book emphasizes problem-solving techniques and critical thinking, often presenting problems used in math competitions, making it more rigorous and engaging.

Can 'Introduction to Geometry' by Richard Rusczyk help prepare for math competitions?

Absolutely. This book is widely used by students preparing for math competitions such as AMC and Math Olympiads due to its challenging problems and in-depth explanations.

Additional Resources

Introduction to Geometry by Richard Rusczyk: A Professional Review

introduction to geometry by richard rusczyk stands as a pivotal resource in the landscape of mathematical education, particularly for middle and high school students aiming to deepen their understanding of geometry. Authored by Richard Rusczyk, a renowned figure in math education and founder of the Art of Problem Solving (AoPS) initiative, this textbook has garnered attention for its unique approach to teaching geometry through problem-solving and critical thinking rather than rote memorization.

In-depth Analysis of Introduction to Geometry by Richard Rusczyk

Richard Rusczyk's Introduction to Geometry departs from traditional geometry textbooks by focusing heavily on developing mathematical intuition and reasoning skills. Unlike many standard curricula that emphasize procedural knowledge and formula memorization, this book encourages students to explore geometric concepts through challenging problems and proofs. The integration of rigorous problem-solving exercises makes it a favored choice among students preparing for math competitions such as MATHCOUNTS and the American Mathematics Competitions (AMC).

The book is structured to progressively build a strong foundation in fundamental geometric principles, including points, lines, angles, triangles, polygons, circles, and three-dimensional geometry. However, what sets it apart is its emphasis on the why behind the concepts, fostering a deeper conceptual understanding. This approach aligns well with the current educational trends that prioritize critical thinking and analytical skills over mere factual recall.

Pedagogical Approach and Content Structure

Introduction to Geometry by Richard Rusczyk adopts a problem-based learning model that challenges students to derive formulas, prove theorems, and solve complex problems systematically. Each chapter begins with clear definitions and axioms, followed by worked examples and an extensive set of problems that range from straightforward exercises to Olympiad-level challenges. This structure supports differentiated learning, enabling students at various skill levels to benefit from the material.

The textbook includes:

- Comprehensive coverage of Euclidean geometry topics
- Proof techniques including direct, indirect, and contradiction proofs
- Emphasis on geometric transformations and coordinate geometry
- Rich problem sets that cultivate logical reasoning and creativity

This thorough content coverage makes it not only a solid introductory text but also an excellent bridge to more advanced geometry studies.

Comparing Introduction to Geometry with Traditional Textbooks

When compared to conventional high school geometry textbooks, Rusczyk's Introduction to Geometry is notably more rigorous and challenging. Traditional textbooks often follow a predictable pattern: definitions, theorems, example problems, and practice exercises. While these resources efficiently convey basic knowledge, they may lack the depth required to stimulate a student's problem-solving abilities.

In contrast, Introduction to Geometry incorporates a wider variety of problem types, many of which are sourced from competitive math settings. This emphasis on problem-solving caters particularly to students interested in math competitions or those seeking a deeper understanding of geometry beyond the classroom. The trade-off, however, is that the book may seem intimidating for beginners or those without a strong math background.

Features That Distinguish Introduction to Geometry by Richard Rusczyk

1. Emphasis on Proof and Logical Thinking

One of the hallmark features of this book is its commitment to teaching students how to construct rigorous proofs. Geometry is often the first area of mathematics where students encounter formal proof writing, and Rusczyk's text provides a supportive yet challenging environment for mastering this skill. Through carefully curated problems, students learn various proof strategies, which are essential for success in higher mathematics.

2. Integration with the Art of Problem Solving Curriculum

As part of the AoPS series, Introduction to Geometry naturally complements other resources like Prealgebra, Algebra, and Intermediate Algebra by the same author. This interconnected curriculum is designed to build a comprehensive mathematical foundation. Additionally, AoPS offers online classes and forums that enhance the learning experience, allowing students to discuss problems and solutions, thereby reinforcing the material covered in the book.

3. Rich Problem Sets with Varied Difficulty Levels

The problems included in the book are not simply exercises; they are thoughtfully crafted challenges that encourage students to think creatively and apply multiple concepts simultaneously. This layered difficulty ensures that learners can progressively build confidence and mastery. The inclusion of "challenge problems" at the end of chapters pushes students to extend their thinking beyond standard applications.

4. Visual Aids and Clear Explanations

Despite the challenging content, the book incorporates clear diagrams and step-by-step explanations to support comprehension. Visual learners benefit from well-drawn figures that illustrate complex concepts, while textual explanations ensure that abstract ideas are accessible. This combination is crucial in geometry, where spatial reasoning plays a significant role.

Potential Drawbacks and Considerations

While Introduction to Geometry by Richard Rusczyk is widely praised for its depth and rigor, some potential drawbacks are worth noting. For students new to geometry or those who prefer a more guided, less challenging approach, the book's difficulty may be discouraging. It requires a certain level of mathematical maturity and motivation to engage fully with the proofs and problem-solving techniques presented.

Additionally, the book is less focused on real-world applications of geometry, which are commonly emphasized in standard curricula to demonstrate practical utility. Instead, the focus remains largely theoretical and competition-oriented. For educators or students seeking a textbook with extensive

application-based problems, this may be a limitation.

Who Should Use Introduction to Geometry by Richard Rusczyk?

This textbook is ideally suited for motivated middle and high school students who have a solid foundation in algebra and wish to deepen their understanding of geometry through an analytical lens. It is particularly beneficial for those preparing for math competitions or aiming to pursue advanced mathematical studies. Educators looking for a resource to challenge gifted students or supplement a standard curriculum will also find this book valuable.

- Math competition participants
- Advanced high school geometry students
- Homeschoolers seeking rigorous math texts
- Teachers aiming to enhance problem-solving instruction

Conclusion: A Valuable Resource for Serious Geometry Learners

Introduction to Geometry by Richard Rusczyk represents a significant contribution to math education literature, distinguished by its problem-solving emphasis and thorough treatment of geometric concepts. While it may not be the ideal starting point for every student, those who engage with its content stand to develop a deep, intuitive understanding of geometry and sharpen their mathematical reasoning skills. As such, it remains a recommended resource for ambitious learners and educators striving to elevate their geometry instruction.

[Introduction To Geometry By Richard Rusczyk](#)

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geometry, Hyperelliptical Geometry, which will provide the unification of physics, thus uniting the Theory of Relativity and Quantum Theory. A new geometry for a new Mathematics and a new Physics. (ISBN 978-65-00-98107-0).

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introduction to geometry by richard rusczyk: *The Well-Trained Mind* Susan Wise Bauer, Jessie Wise, 2016-08-09 Is your child getting lost in the system, becoming bored, losing his or her natural eagerness to learn? If so, it may be time to take charge of your child's education—by doing it yourself. *The Well-Trained Mind* will instruct you, step by step, on how to give your child an academically rigorous, comprehensive education from preschool through high school—one that will train him or her to read, to think, to understand, to be well-rounded and curious about learning. Veteran home educators Susan Wise Bauer and Jessie Wise outline the classical pattern of education called the trivium, which organizes learning around the maturing capacity of the child's mind and comprises three stages: the elementary school "grammar stage," when the building blocks of information are absorbed through memorization and rules; the middle school "logic stage," in which the student begins to think more analytically; and the high-school "rhetoric stage," where the student learns to write and speak with force and originality. Using this theory as your model, you'll be able to instruct your child—whether full-time or as a supplement to classroom education—in all levels of reading, writing, history, geography, mathematics, science, foreign languages, rhetoric, logic, art, and music, regardless of your own aptitude in those subjects. Thousands of parents and teachers have already used the detailed book lists and methods described in *The Well-Trained Mind* to create a truly superior education for the children in their care. This extensively revised fourth edition contains completely updated curricula and book lists, links to an entirely new set of online resources, new material on teaching children with learning challenges, cutting-edge math and sciences recommendations, answers to common questions about home education, and advice on practical matters such as standardized testing, working with your local school board, designing a high-school program, preparing transcripts, and applying to colleges. You do have control over what and how your child learns. *The Well-Trained Mind* will give you the tools you'll need to teach your child with confidence and success.

introduction to geometry by richard rusczyk: How to Make Sure Your Child Gets an A+ in Math Shu Chen Hou, Unlock Your Child's Full Math Potential and Secure Their Academic Success! Are you concerned about your child's math performance? Do you want to see them not just pass but excel in this critical subject? *How to Make Sure Your Child Gets an A+ in Math* is your ultimate guide to transforming your child into a math champion! This groundbreaking book takes you on a journey through the world of math education, offering invaluable insights, proven strategies, and expert advice to ensure your child's success. From building a strong math foundation to mastering effective study techniques, this book covers it all. Discover how to: Instill a growth mindset to boost confidence and motivation. Navigate the intricacies of the math curriculum at every grade level. Support your child's learning journey with effective communication and collaboration with teachers. Equip them with winning exam strategies to outperform their peers. With real-life case studies and success stories, you'll witness firsthand the transformation that can happen when you apply these techniques. Plus, you'll find essential resources for additional help, math competitions, and long-term career planning in mathematics. Don't let your child struggle with math when they can shine! Invest in their academic future today with *How to Make Sure Your Child Gets an A+ in Math*.

Give your child the confidence, knowledge, and skills to conquer the world of math and secure a bright future. Order now and watch them rise to the top of the class!

introduction to geometry by richard rusczyk: *Art of Problem Solving High School Violet 5-Book Boxed Set # 4* Richard Rusczyk, David Patrick, 2019-06-25 *Art of Problem Solving High School Violet 5-Book Boxed Set # 4 : Art of Problem Solving Precalculus 2-Book Set : A* comprehensive textbook covering precalculus topics. Specific topics covered include trigonometry, complex numbers, vectors, and matrices. Includes many problems from the AIME and USAMO competitions. *Art of Problem Solving Calculus 2-Book Set A* comprehensive textbook covering single-variable calculus. Specific topics covered include limits, continuity, derivatives, integrals, power series, plane curves, and differential equations. The Fifth Book is a *Surprise Horrible Book* from the *Horrible Books Humorously Educational Series* that covers Math, Science, Geography, History, and Biography that will totally complement your child's love for learning.

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introduction to geometry by richard rusczyk: *Variabile excentrice... la propriu și la figurat* Cornéliu Tocan, 2021-04-01 Cartea reprezintă o pledoarie față de învățătorii și profesorii de matematică (de nivel primar, gimnazial și liceal) – acești tenaci timonieri de destine profesionale care navighează de decenii pe oceanele cunoașterii – precum și față de participanții la olimpiade de matematică și elevii dotați – întrepizii exploratori intelectuali care împing zilnic frontierele cogniției. Schimbând de cap pentru a se apropia de această promițătoare metodă de predare, aceștia vor atrage în siajul lor pe cei buni la matematică, matleții, îndrăgostiții de matematică, persoanele animate de curiozitate intelectuală, mințile carteziene. Cartea este un instrument practic și util de îmbogățire intelectuală pentru elevii de toate nivelurile și pentru părinții lor. Astfel, respectând ritmul fiecăruia și al tuturor, elevii avansați se pot familiariza cu noțiuni depășind nivelul lor oficial, elevii care au înțeles și și-au însușit materia curentă au oportunitatea de a explora concepte din anii superiori – ca îmbogățire sau ca metode alternative, exploatând cunoștințele acumulate în prezent –, iar elevii descurajați și cu gânduri de abandon pot tatona această nouă abordare pentru a(-și) demonstra că sunt capabili să rezolve exerciții din anii următori, ceea ce ar contribui la reclădirea stimei de sine și la dobândirea motivației necesare pentru a persevera. Orice părinte ar fi mulțumit de educația oferită în școală și ar fi extrem de mândru aflând că progenitura sa este capabilă să rezolve exerciții la un nivel mai avansat.

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introduction to geometry by richard rusczyk: *Variables excentriques... au propre et au figuré* Cornéliu Tocan, 2020-05-05 L'ouvrage est un plaidoyer auprès des enseignants de mathématiques (tant au niveau primaire qu'au secondaire) – ces tenaces timoniers de destins professionnels, qui, pour des décennies, naviguent sur les océans du savoir – et aussi bien auprès des participants aux olympiades de mathématiques et des élèves doués – les intrépides explorateurs intellectuels qui poussent quotidiennement les frontières de la cognition. En changeant de cap pour s'approcher de cette prometteuse méthode didactique, ils entraîneront dans leur sillage les matheux, les amants des mathématiques, les gens carburés par la curiosité intellectuelle, les esprits cartésiens. Le livre est un enrichissement pratique et utile pour tous les élèves de tous les niveaux et leurs parents. Le devancement de la matière est l'un des avantages immédiats de cette approche didactique, avec des effets pédagogiques rapides et bénéfiques. Ainsi, les élèves avancés peuvent se familiariser avec de la matière supérieure à leur niveau officiel, les élèves ayant compris et maîtrisé la matière en cours ont l'occasion d'explorer des notions des années futures – à titre d'enrichissement ou de méthode alternative, tout en exploitant les acquis du présent –, tandis que

les élèves découragés et ayant des pensées de décrochage (se) démontrent qu'ils sont capables de résoudre des exercices des années à venir, ce que leur permettrait de rebâtir leur estime de soi, de gagner de la confiance et d'acquérir la motivation nécessaire pour persévérer. En respectant la bien connue doctrine pédagogique « chacun à son rythme », l'estime de soi et la motivation des élèves seront grandissantes. Tout parent serait content de l'enseignement dispensé à l'école, en étant extrêmement fier d'apprendre que sa progéniture est capable de résoudre des exercices de niveau plus avancé. Témoignages Camp de mathématiques 21-25 juin 2019 Polytechnique Montréal Association Mathématique du Québec - participants rencontrés en 2019 - ▼▼▼ Je suis très impressionné par tout l'effort que l'auteur a mis dans son livre. Je crois que ses motivations sont celles d'un chercheur scientifique, de quelqu'un qui veut comprendre et veut partager sa solution élégante. Particulièrement en mathématiques, on peut être guidés par l'élégance, comme le disait G. H. Hardy. Prof. Marc Laforest, Ph. D. Département de mathématiques et de génie industriel Polytechnique Montréal ▼▼▼ À travers ma lecture sur la résolution de problèmes avec les variables excentriques, j'ai appris une nouvelle et superbe façon de penser autrement et logiquement avec une abondance d'applications concrètes. La beauté des variables excentriques, c'est que c'est une approche facile à comprendre qui est même utile à l'école et dans les concours de mathématiques! Je conseille la lecture à des étudiants autant jeunes que vieux, qui aimeraient explorer les mathématiques et pousser leurs capacités de résoudre des problèmes difficiles. Je conseille aussi cette lecture aux professeurs de mathématiques qui pourront montrer cette technique à leurs étudiants ayant de la difficulté à résoudre des problèmes de la façon « traditionnelle ». John Bramos - Collège Sainte-Anne, Montréal participant à des concours de mathématiques (AQJM, Opti-Math, AMQ, Pascal, Pythagore, Fibonacci) ▼▼▼ Une belle œuvre mathématique qui nourrit les jeunes où ils ont le plus besoin. Le livre simplifie des concepts algébriques en définissant des variables reposant sur une agréable symétrie. Intégrer les variables excentriques dans les programmes du secondaire pour donner suite à l'enseignement de l'algèbre pourrait briser l'inertie psychologique du choix traditionnel d'une variable dans un problème mathématique afin de pousser les frontières de la norme algébrique imposée par le système d'éducation du secondaire. Pour ma part, je recommande cette source de savoir à toute personne désirant remettre en question l'enseignement traditionnel de l'algèbre ou à ceux qui veulent tout simplement mieux performer dans des concours de mathématiques. Rami Ghantous - Collège Jean-de-Brébeuf et Collège Beaubois, Montréal Participant à des concours mathématiques (AMQ, Thalès, Gauss, Euclide, Fermat) ▼▼▼ Ce livre présente un concept pratique et simple qui permet de voir sous un nouvel angle plusieurs types de calculs. En plus de rendre certains problèmes d'algèbre, plus avancés, accessibles plus tôt dans le cursus, les variables excentriques montrent un aspect plus créatif des mathématiques, chose qui n'est pas assez présente dans les cours de cette matière dispensés à l'école. L'utilisation des variables excentriques devrait être enseignée non seulement pour donner un autre outil pour la résolution de certains problèmes, mais également pour montrer aux élèves que l'on peut toujours sortir des sentiers battus, même en mathématiques. Lynda Khalfoun - Collège Jésus-Marie de Sillery, Québec participante à des concours de mathématiques (AQJM, AMQ) ▼▼▼ Tout au long de ma lecture de ce livre, je me suis retrouvé à être de plus en plus fasciné par les variables excentriques et toutes les utilités qui y sont rattachées. Il est rare de trouver un ouvrage qui montre une nouvelle méthode de résolution de problèmes, autant agréable que facile à lire. Si j'étais tombé sur un livre comme celui-ci au secondaire, mes professeurs de mathématiques n'auraient jamais arrêté d'en entendre parler, puisque - adorant trouver de nouvelles solutions à chaque problème - j'aurais eu les variables excentriques comme nouvel outil. Maintenant que je les ai découvertes, il est certain que je vais me mettre à les utiliser. De plus, étant avide de concours de mathématiques, je passe beaucoup de temps à étudier de nouvelles formules ou apprendre des techniques pour aller plus vite, tout en faisant le moins d'erreur de calculs. J'ai maintenant une excellente méthode que je compte mettre à profit, puisque, en plus d'être intuitive, elle simplifie grandement certains calculs. Marc-Antoine Mongrain Collège Jean-Eudes et Collège Jean-de-Brébeuf, Montréal Participant à des concours de mathématiques (AQJM, AMQ, AMC, CCMS, Opti-Math, Purple Comet, Thalès, Byron-Germain,

Fibonacci, Pythagore, Gauss, Pascal, Cayley, Fermat, Euclide, camp de l'université d'Ottawa) ▼▼▼ À travers ce livre, l'auteur nous fait découvrir l'utilité et la créativité des variables excentriques, et la résolution des problèmes avec celles-ci. La lecture de ce livre fut extrêmement agréable, car j'étais en train de découvrir des méthodes de résolutions de problèmes créativement différentes par rapport à celles apprises à l'école. Notamment les résolutions appelées « hors des sentiers battus » m'ont émerveillée avec leur simplicité de compréhension et leur élégance. En deuxième et troisième du secondaire, j'aurais été ravie d'avoir lu ce livre ou de m'avoir enseigné ce sujet dans mes classes, puisque l'utilisation des variables excentriques ne nécessite pas de notions plus avancées que l'algèbre de base, mais permet toutefois de résoudre autant, et même plus, de problèmes qu'avec des notions plus complexes apprises à la fin du secondaire. Je recommande ce livre à tous et à toutes les avides enthousiastes des mathématiques, et même à ceux qui ne le sont pas. Anna Shi - Collège Sainte-Anne, Montréal participante à des concours de mathématiques (AMQ, COMC, AQJM, AMC, Opti-Math) ▼▼▼ Après ma lecture, j'ai découvert qu'il y avait plusieurs méthodes simples et efficaces pour résoudre des questions difficiles. Malgré la simplicité du sujet, il s'avère extrêmement utile pour tout problème et sert très bien de base pour des concours de mathématiques. C'est la beauté des variables excentriques! Ce livre approfondit aussi beaucoup nos connaissances envers ce sujet, que l'école n'enseigne malheureusement pas. Je crois certainement que ce concept vaudrait la peine d'être enseigné au secondaire, parce ce qu'il développerait la pensée mathématique. Leo Shi - Collège Jean-de-Brébeuf, Montréal participant à des concours de mathématiques (COMC, CMO, Gauss, Pascal, Fryer, CIMC, Kangaroo, AMC 10, Mathematica, AMQ, AQJM, Opti-Math) ▼▼▼ On nous présente une méthode qui est à connaître par tous les avides de mathématiques au niveau d'olympiade. Les variables excentriques représentent une manière élégante de simplifier des problèmes complexes et elles sont adroitement explorées pour plusieurs branches mathématiques. Leo Vanciu - Collège Jean de la Mennais, Montréal participant à des concours de mathématiques (AMQ, COMC, Formula of Unity, AQJM, AMC, Kangaroo, Cayley, Fermat, Galois, Russian Tournament of the Towns) • • • ▼▼▼ J'admire dans cette œuvre la passion et la sincérité de l'auteur par rapport au sujet, ce qui permet aux lecteurs d'avoir une compréhension plus aisée des variables excentriques. Faisant partie des gens avec une facilité en mathématiques, je suis d'avis que chacun devrait avoir la possibilité d'apprendre des notions à leur niveau et à leur rythme. Je crois que cet ouvrage en est la clé. J'aurais bien aimé apprendre ces notions en classe; je suis ravie d'avoir pris connaissance d'un nouvel outil mathématique. • • • ▼▼▼ Kassandra Roberge - Collège Jésus-Marie de Sillery, Québec participante à des concours de mathématiques (AQJM, AMQ, Gauss, Fryer, Galois, Hypathia, Euclid) ▼▼▼ Enseigner, c'est outiller intellectuellement. Ce que propose ici Cornéliu Tocan est une remarquable clé à molette mathématique, un outil polyvalent capable d'affronter efficacement une grande variété de problèmes. Mais avant tout, comme les méthodes proposées reposent sur la symétrie, notion intimement liée à l'esthétique, ces pages regorgent d'une qualité ô combien désirable: l'élégance. Luc Tremblay, enseignant de mathématiques Collège Jésus-Marie de Sillery, Québec • • • ▼▼▼ J'ai parcouru l'ouvrage « Variables excentriques » avec beaucoup d'enthousiasme. Cela m'a rappelé de nombreux souvenirs de secondaire et du cégep, par l'introduction graduelle des notions et par les démonstrations détaillées et pas à pas des solutions. C'est une approche didactique originale de plusieurs méthodes basées sur la même notation, offrant des applications inédites. Enseignée au secondaire, la technique des variables excentriques pourrait aider des élèves en difficulté ou bien susciter la curiosité des élèves les plus aguerris en mathématiques. C'est un bon travail de recherche et de vulgarisation. Jean-Philippe Grenier, actuaire Morneau Shepell, Québec

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