

Maths Grade 12 March2014 Control Test Paper

Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

Features an introduction to probability theory using measure theory. This work provides proofs of the essential introductory results and presents the measure theory and mathematical details in terms of intuitive probabilistic concepts, rather than as separate, imposing subjects.

A hilarious reeducation in mathematics—full of joy, jokes, and stick figures—that sheds light on the countless practical and wonderful ways that math structures and shapes our world. In *Math With Bad Drawings*, Ben Orlin reveals to us what math actually is; its myriad uses, its strange symbols, and the wild leaps of logic and faith that define the usually impenetrable work of the mathematician. Truth and knowledge come in multiple forms: colorful drawings, encouraging jokes, and the stories and insights of an empathetic teacher who believes that math should belong to everyone. Orlin shows us how to think like a mathematician by teaching us a brand-new game of tic-tac-toe, how to understand an economic crisis by rolling a pair of dice, and the mathematical headache that ensues when attempting to build a spherical Death Star. Every discussion in the book is illustrated with Orlin's trademark "bad drawings," which convey his message and insights with perfect pitch and clarity. With 24 chapters covering topics from the electoral college to human genetics to the reasons not to trust statistics, *Math with Bad Drawings* is a life-changing book for the math-estranged and math-enamored alike.

The rise of high-stakes testing in New York and across the nation has narrowed and simplified what is taught, while becoming central to the effort to privatize public schools. However, it and similar reform efforts have met resistance, with New York as the exemplar for how to repel standardized testing and invasive data collection, such as inBloom. In New York, the two parent/teacher organizations that have been most effective are Long Island Opt Out and New York State Allies for Public Education. Over the last four years, they and other groups have focused on having parents refuse to submit their children to the testing regime, arguing that if students don't take the tests, the results aren't usable. The opt-out movement has been so successful that 20% of students statewide and 50% of students on Long Island refused to take tests. In *Opting Out*, two parent leaders of the opt-out movement—Jeanette Deutermann and Lisa Rudley—tell why and how they became activists in the two organizations. The story of parents, students, and teachers resisting not only high-stakes testing but also privatization and other corporate reforms parallels the rise of teachers across the country going on strike to demand increases in school funding and teacher salaries. Both the success of the opt-out movement and teacher strikes reflect the rise of grassroots organizing using social media to influence policy makers at the local, state, and national levels. Perfect for courses such as: *The Politics Of Education | Education Policy | Education Reform Community Organizing | Education Evaluation | Education Reform | Parents And Education*

This theory-to-practice guide offers leading-edge ideas for wide-scale curriculum reform in sciences, technology, engineering, the arts, and mathematics—the STEAM subjects. Chapters emphasize the critical importance of current and emerging digital technologies in bringing STEM education up to speed and implementing changes to curricula at the classroom level. Of particular interest are the diverse ways of integrating the liberal arts into STEM course content in mutually reshaping humanities education and scientific education. This framework and its many instructive examples are geared to ensure that both educators and students can become innovative thinkers and effective problem-solvers in a knowledge-based society. Included in the coverage:

Reconceptualizing a college science learning experience in the new digital era. Using mobile devices to support formal, informal, and semi-formal learning. Change of attitudes, self-concept, and team dynamics in engineering education. The language arts as foundational for science, technology, engineering, art, and mathematics. Can K-12 math teachers train students to make valid logical reasoning? Moving forward with STEAM education research. Emerging Technologies for STEAM Education equips educators, education researchers, administrators, and education policymakers with curricular and pedagogical strategies for making STEAM education the bedrock of accessible, relevant learning in keeping with today's digital advances.

When does physics depart the realm of testable hypothesis and come to resemble theology? Peter Woit argues that string theory isn't just going in the wrong direction, it's not even science. *Not Even Wrong* shows that what many physicists call superstring "theory" is not a theory at all. It makes no predictions, not even wrong ones, and this very lack of falsifiability is what has allowed the subject to survive and flourish. Peter Woit explains why the mathematical conditions for progress in physics are entirely absent from superstring theory today, offering the other side of the story.

Surveys the various techniques that can be used to evaluate students' learning, including summative, diagnostic, and formative approaches and the assessment of specific skills

The amount of data being produced by neuroscientists is increasing rapidly, driven by advances in neuroimaging and recording techniques spanning multiple scales of resolution. The availability of such data poses significant challenges for their processing and interpretation. To gain a deeper understanding of the surrounding issues, the Editors of this e-Book reached out to an interdisciplinary community, and formed the Cortical Networks Working Group, and the genesis of this e-Book thus began with the formation of this Working Group, which was supported by the National Institute for Mathematical and Biological Synthesis in the USA. The Group consisted of scientists from neuroscience, physics, psychology and computer science, and meetings were held in person. (A detailed list of the group members is presented in the Editorial that follows.) At the time we started, in 2010, the term "big data" was hardly in existence, though the volume of data we were handling would certainly have qualified. Furthermore, there was significant interest in harnessing the power of supercomputers to perform large scale neuronal simulations, and in creating specialized hardware to mimic neural function. We realized that the various disciplines represented in our Group could and should

work together to accelerate progress in Neuroscience. We searched for common threads that could define the foundation for an integrated approach to solve important problems in the field. We adopted a network-centric perspective to address these challenges, as the data are derived from structures that are themselves network-like. We proposed three inter-twined threads, consisting of measurement of neural activity, analysis of network structures deduced from this activity, and modeling of network function, leading to theoretical insights. This approach formed the foundation of our initial call for papers. When we issued the call for papers, we were not sure how many papers would fall into each of these threads. We were pleased that we found significant interest in each thread, and the number of submissions exceeded our expectations. This is an indication that the field of neuroscience is ripe for the type of integration and interchange that we had anticipated. We first published a special topics issue after we received a sufficient number of submissions. This is now being converted to an e-book to strengthen the coherence of its contributions. One of the strong themes emerging in this e-book is that network-based measures capture better the dynamics of brain processes, and provide features with greater discriminative power than point-based measures. Another theme is the importance of network oscillations and synchrony. Current research is shedding light on the principles that govern the establishment and maintenance of network oscillation states. These principles could explain why there is impaired synchronization between different brain areas in schizophrenics and Parkinson's patients. Such research could ultimately provide the foundation for an understanding of other psychiatric and neurodegenerative conditions. The chapters in this book cover these three main threads related to cortical networks. Some authors have combined two or more threads within a single chapter. We expect the availability of related work appearing in a single e-book to help our readers see the connection between different research efforts, and spur further insights and research.

Versatile for Several Interrelated Courses at the Undergraduate and Graduate Levels
Financial Mathematics: A Comprehensive Treatment provides a unified, self-contained account of the main theory and application of methods behind modern-day financial mathematics. Tested and refined through years of the authors' teaching experiences, the book encompasses a breadth of topics, from introductory to more advanced ones. Accessible to undergraduate students in mathematics, finance, actuarial science, economics, and related quantitative areas, much of the text covers essential material for core curriculum courses on financial mathematics. Some of the more advanced topics, such as formal derivative pricing theory, stochastic calculus, Monte Carlo simulation, and numerical methods, can be used in courses at the graduate level. Researchers and practitioners in quantitative finance will also benefit from the combination of analytical and numerical methods for solving various derivative pricing problems. With an abundance of examples, problems, and fully worked out solutions, the text introduces the financial theory and relevant mathematical methods in a mathematically rigorous yet engaging way. Unlike similar texts in the field, this one presents multiple problem-solving approaches, linking related comprehensive techniques for pricing different types of financial derivatives. The book provides complete coverage of both discrete- and continuous-time financial models that form the cornerstones of financial derivative pricing theory. It also presents a self-contained introduction to stochastic calculus and martingale theory, which are key fundamental elements in quantitative finance.

Following three teenagers who chose to spend one school year living in Finland, South Korea, and Poland, a literary journalist recounts how attitudes, parenting, and rigorous teaching have revolutionized these countries' education results.

Texas TExES 135 Mathematics 8-12 Research & Education Assn

Innovation in the classroom is about empowering teachers to develop intelligent, creative and effective teaching methods that will challenge and engage learners. Drawing on contemporary research and case studies from the UK and internationally, this book examines the theory behind innovative teaching and learning and its practical application in primary schools. Reflection points throughout the chapters encourage self-evaluation and development, giving students greater confidence to plan and deliver their own innovative teaching. Topics covered include: Creative approaches to learning in primary and early years education Using different settings and technologies to develop thinking skills Promoting positive classroom behaviour and inclusion Innovation in planning and assessment

This text presents a modern theory of analysis, control, and optimization for dynamic networks. Mathematical techniques of Lyapunov drift and Lyapunov optimization are developed and shown to enable constrained optimization of time averages in general stochastic systems. The focus is on communication and queueing systems, including wireless networks with time-varying channels, mobility, and randomly arriving traffic. A simple drift-plus-penalty framework is used to optimize time averages such as throughput, throughput-utility, power, and distortion. Explicit performance-delay tradeoffs are provided to illustrate the cost of approaching optimality. This theory is also applicable to problems in operations research and economics, where energy-efficient and profit-maximizing decisions must be made without knowing the future. Topics in the text include the following: - Queue stability theory - Backpressure, max-weight, and virtual queue methods - Primal-dual methods for non-convex stochastic utility maximization - Universal scheduling theory for arbitrary sample paths - Approximate and randomized scheduling theory - Optimization of renewal systems and Markov decision systems Detailed examples and numerous problem set questions are provided to reinforce the main concepts. Table of Contents: Introduction / Introduction to Queues / Dynamic Scheduling Example / Optimizing Time Averages / Optimizing Functions of Time Averages / Approximate Scheduling / Optimization of Renewal Systems / Conclusions

Amma, universally known as "The Hugging Saint," went through a two-decade transformation from a simple fisherman's daughter to an international wonder worshiped by millions. Gail "Gayatri" Tredwell was there every step of the way--from early devotee to head female disciple, ever-present personal attendant, handmaiden, whipping post, and unwilling keeper of some devastating secrets. Because she became fluent in the Malayalam language and had continual intimate proximity to Amma for twenty years, Tredwell is uniquely capable of portraying this famous woman. She tells her tale with straightforward honesty, fairness, and a dash of Aussie snap and wit. Although the guru's flaws are a necessary part of her story and awakening, she strives to be factual throughout, digging deep to eschew victim frameworks and take responsibility for her own role in accepting the abuse and perpetuating the lies. Tredwell takes us vividly through her varying stages, starting with naïveté and innocent devotion, then on to dawning awareness and confusion, finally to emotional breakdown and her shocking "enlightenment"--her realization that the liberation she urgently required was in fact liberation from her own guru

This report presents the first internationally comparable results to OECD's 2003 Programme for International Student Assessment (PISA) Survey of the educational performance of 15-year-olds in reading, mathematics, and science in 25 OECD countries.

Introduction to public health communication / Claudia Parvanta -- Population health : a primer / Patrick L. Remington -- A public

health communication planning framework / Claudia Parvanta -- How to communicate about data / David E. Nelson -- Understanding and reporting the science / David E. Nelson -- Communicating for policy and advocacy / Claudia Parvanta -- Health literacy and clear health communication / Erika M. Hedden -- Behavior change communication : theories, models and practice strategies / Claudia Parvanta -- Formative research / Claudia Parvanta -- Media vehicles, platforms and channels / Claudia Parvanta -- Implementing a communication intervention / Claudia Parvanta -- Evaluating a health communication program / May Grabbe Kennedy and Jonathan DeShazo -- Clinician-client communication / Richard N. Harner -- The role of communication in cancer prevention and care / Wen-ying Sylvia Chou, Danielle Blanch-Hartigan, Chan Le Thai -- Crisis and emergency risk communication : a primer / David W. Cragin and Claudia Parvanta -- Health communication in resource-poor countries / Carmen Cronin and Suruchi Sood

"How do you want your child to feel about math? Confident, curious and deeply connected? Then Moebius Noodles is for you. It offers advanced math activities to fit your child's personality, interests, and needs. Can you enjoy playful math with your child? Yes! The book shows you how to go beyond your own math limits and anxieties to do so. It opens the door to a supportive online community that will answer your questions and give you ideas along the way. Learn how you can create an immersive rich math environment for your baby. Find out ways to help your toddler discover deep math in everyday experiences. Play games that will develop your child's sense of happy familiarity with mathematics. A five-year-old once asked us, "Who makes math?" and jumped for joy at the answer, "You!" Moebius Noodles helps you take small, immediate steps toward the sense of mathematical power. You and your child can make math your own. Together, make your own math!"--Publisher's website.

Big ideas in the mathematics curriculum for older school students, especially those that are hard to learn and hard to teach, are covered in this book. It will be a first port of call for research about teaching big ideas for students from 9-19 and also has implications for a wider range of students. These are the ideas that really matter, that students get stuck on, and that can be obstacles to future learning. It shows how students learn, why they sometimes get things wrong, and the strengths and pitfalls of various teaching approaches. Contemporary high-profile topics like modelling are included. The authors are experienced teachers, researchers and mathematics educators, and many teachers and researchers have been involved in the thinking behind this book, funded by the Nuffield Foundation. An associated website, hosted by the Nuffield Foundation, summarises the key messages in the book and connects them to examples of classroom tasks that address important learning issues about particular mathematical ideas.

Principles of Microeconomics 2e covers the scope and sequence of most introductory microeconomics courses. The text includes many current examples, which are handled in a politically equitable way. The outcome is a balanced approach to the theory and application of economics concepts. The second edition has been thoroughly revised to increase clarity, update data and current event impacts, and incorporate the feedback from many reviewers and adopters. The text and images in this book are grayscale. The first (previous) edition of Principles of Microeconomics via OpenStax is available via ISBN 9781680920093.

A comprehensive introduction to machine learning that uses probabilistic models and inference as a unifying approach. Today's Web-enabled deluge of electronic data calls for automated methods of data analysis. Machine learning provides these, developing methods that can automatically detect patterns in data and then use the uncovered patterns to predict future data. This textbook offers a comprehensive and self-contained introduction to the field of machine learning, based on a unified, probabilistic approach. The coverage combines breadth and depth, offering necessary background material on such topics as probability, optimization, and linear algebra as well as discussion of recent developments in the field, including conditional random fields, L1 regularization, and deep learning. The book is written in an informal, accessible style, complete with pseudo-code for the most important algorithms. All topics are copiously illustrated with color images and worked examples drawn from such application domains as biology, text processing, computer vision, and robotics. Rather than providing a cookbook of different heuristic methods, the book stresses a principled model-based approach, often using the language of graphical models to specify models in a concise and intuitive way. Almost all the models described have been implemented in a MATLAB software package—PMTK (probabilistic modeling toolkit)—that is freely available online. The book is suitable for upper-level undergraduates with an introductory-level college math background and beginning graduate students.

"Comprehensive reviews (cover all state-defined domains) ; full-length exams (with detailed explanations) ; test strategies (for passing the TExES)"--Cover.

Learning to read, and to spell are two of the most important cultural skills that must be acquired by children, and for that matter, anyone learning a second language. We are not born with an innate ability to read. A reading system of mental representations that enables us to read must be formed in the brain. Learning to read in alphabetic orthographies is the acquisition of such a system, which links mental representations of visual symbols (letters) in print words, with pre-existing phonological (sound) and semantic (comprehension) cognitive systems for language. Although spelling draws on the same representational knowledge base and is usually correlated with reading, the acquisition processes involved are not quite the same. Spelling requires the sequential production of letters in words, and at beginning levels there may not be a full degree of integration of phonology with its representation by the orthography. Reading, on the other hand, requires only the recognition of a word for pronunciation. Hence, spelling is more difficult than reading, and learning to spell may necessitate more complete representations, or more conscious access to them. The learning processes that children use to acquire such cognitive systems in the brain, and whether these same processes are universal across different languages and orthographies are central theoretical questions. Most children learn to read and spell their language at the same time, thus the co-ordination of these two facets of literacy acquisition needs explication, as well as the effect of different teaching approaches on acquisition. Lack of progress in either reading and/or spelling is also a

major issue of concern for parents and teachers necessitating a cross-disciplinary approach to the problem, encompassing major efforts from researchers in neuroscience, cognitive science, experimental psychology, and education. The purpose of this Research Topic is to summarize and review what has been accomplished so far, and to further explore these general issues. Contributions from different perspectives are welcomed and could include theoretical, computational, and empirical works that focus on the acquisition of literacy, including cross-orthographic research.

Revised and expanded, this Second Edition continues to explore the modern practice of statistical quality control, providing comprehensive coverage of the subject from basic principles to state-of-the-art concepts and applications. The objective is to give the reader a thorough grounding in the principles of statistical quality control and a basis for applying those principles in a wide variety of both product and nonproduct situations. Divided into four parts, it contains numerous changes, including a more detailed discussion of the basic SPC problem-solving tools and two new case studies, expanded treatment on variable control charts with new examples, a chapter devoted entirely to cumulative-sum control charts and exponentially-weighted, moving-average control charts, and a new section on process improvement with designed experiments.

Spectrum Sharing in Wireless Networks: Fairness, Efficiency, and Security provides a broad overview of wireless network spectrum sharing in seven distinct sections: The first section examines the big picture and basic principles, explaining the concepts of spectrum sharing, hardware/software function requirements for efficient sharing, and future trends of sharing strategies. The second section contains more than 10 chapters that discuss differing approaches to efficient spectrum sharing. The authors introduce a new coexistence and sharing scheme for multi-hop networks, describe the space-time sharing concept, introduce LTE-U, and examine sharing in broadcast and unicast environments. They then talk about different cooperation strategies to achieve mutual benefits for primary users (PU) and secondary users (SU), discuss protocols in a spectrum sharing context, and provide different game theory models between PUs and SUs. The third section explains how to model the interactions of PUs and SUs, using an efficient calculation method to determine spectrum availability. Additionally, this section explains how to use scheduling models to achieve efficient SU traffic delivery. The subject of the fourth section is MIMO-oriented design. It focuses on how directional antennas and MIMO antennas greatly enhance wireless network performance. The authors include a few chapters on capacity/rate calculations as well as beamforming issues under MIMO antennas. Power control is covered in the fifth section which also describes the interference-aware power allocation schemes among cognitive radio users and the power control schemes in cognitive radios. The sixth section provides a comprehensive look at security issues, including different types of spectrum sharing attacks and threats as well as corresponding countermeasure schemes. The seventh and final section covers issues pertaining to military applications and examines how the military task protects its data flows when sharing the spectrum with civilian applications.

This book is open access under a CC BY 4.0 license. The book presents the Proceedings of the 13th International Congress on Mathematical Education (ICME-13) and is based on the presentations given at the 13th International Congress on Mathematical Education (ICME-13). ICME-13 took place from 24th- 31st July 2016 at the University of Hamburg in Hamburg (Germany). The congress was hosted by the Society of Didactics of Mathematics (Gesellschaft für Didaktik der Mathematik - GDM) and took place under the auspices of the International Commission on Mathematical Instruction (ICMI). ICME-13 brought together about 3.500 mathematics educators from 105 countries, additionally 250 teachers from German speaking countries met for specific activities. Directly before the congress activities were offered for 450 Early Career Researchers. The proceedings give a comprehensive overview on the current state-of-the-art of the discussions on mathematics education and display the breadth and deepness of current research on mathematical teaching-and-learning processes. The book introduces the major activities of ICME-13, namely articles from the four plenary lecturers and two plenary panels, articles from the five ICMI awardees, reports from six national presentations, three reports from the thematic afternoon devoted to specific features of ICME-13. Furthermore, the proceedings contain descriptions of the 54 Topic Study Groups, which formed the heart of the congress and reports from 29 Discussion Groups and 31 Workshops. The additional important activities of ICME-13, namely papers from the invited lecturers, will be presented in the second volume of the proceedings.

University rankings have gained popularity around the world and are now a significant factor shaping reputation. This second edition updates Ellen Hazelkorn's first comprehensive study of rankings from a global perspective, drawing in new original research and extensive analysis. It is essential reading for policymakers, managers and scholars.

One day down on the farm, Duck got a wild idea. "I bet I could ride a bike," he thought. He waddled over to where the boy parked his bike, climbed on and began to ride. At first he rode slowly and he wobbled a lot, but it was fun! Duck rode past Cow and waved to her. "Hello, Cow!" said Duck. "Moo," said Cow. But what she thought was, "A duck on a bike? That's the silliest thing I've ever seen!" And so Duck rides past sheep, horse, and all the other barnyard animals. Suddenly, a group of kids ride by on their bikes and run into the farmhouse, leaving the bikes outside. Now ALL the animals can ride bikes, just like Duck!

A powerful tool for the approximate solution of differential equations, the finite element is extensively used in industry and research. This book offers students of engineering and physics a comprehensive view of the principles involved, with numerous illustrative examples and exercises. Starting with continuum boundary value problems and the need for numerical discretization, the text examines finite difference methods, weighted residual methods in the context of continuous trial functions, and piecewise defined trial functions and the finite element method. Additional topics include higher order finite element approximation, mapping and numerical integration, variational methods, and partial discretization and time-dependent problems. A survey of generalized finite elements and error estimates concludes the text.

The impacts of climate change on water resource management, as well as increasingly severe natural disasters over the last decades, have caught global attention. Reliable and accurate hydrological forecasts are essential for efficient water resource management and the mitigation of natural disasters. While the notorious nonlinear hydrological processes make accurate forecasts a very challenging task, it requires advanced techniques to build accurate forecast models and reliable management

systems. One of the newest techniques for modeling complex systems is artificial intelligence (AI). AI can replicate the way humans learn and has great capability to efficiently extract crucial information from large amounts of data to solve complex problems. The fourteen research papers published in this Special Issue contribute significantly to the uncertainty assessment of operational hydrologic forecasting under changing environmental conditions and the promotion of water resources management by using the latest advanced techniques, such as AI techniques. The fourteen contributions across four major research areas: (1) machine learning approaches to hydrologic forecasting; (2) uncertainty analysis and assessment on hydrological modeling under changing environments; (3) AI techniques for optimizing multi-objective reservoir operation; (4) adaption strategies of extreme hydrological events for hazard mitigation. The papers published in this issue will not only advance water sciences but also help policymakers to achieve more sustainable and effective water resource management.

Thoroughly updated to reflect changes in both research and methods, this Third Edition of Remler and Van Ryzin's innovative, standard-setting text is imbued with a deep commitment to making social and policy research methods accessible and meaningful. *Research Methods in Practice: Strategies for Description and Causation* motivates readers to examine the logic and limits of social science research from academic journals and government reports. A central theme of causation versus description runs through the text, emphasizing the idea that causal research is essential to understanding the origins of social problems and their potential solutions. Readers will find excitement in the research experience as the best hope for improving the world in which we live, while also acknowledging the trade-offs and uncertainties in real-world research.

Add pizzazz to your favorite seasonal and monthly themes with hundreds of curriculum-based ideas. We've included skill lines and a handy index, plus you'll have access to a brand-new Internet site that will allow you to fill out forms online and print patterns and reproducibles easily. Includes literature links for seasonal and holiday books; monthly science, math, and writing activities; games and learning centers; class projects; and highlights for special days. Topics include lions and lambs, leprechauns, Dr. Seuss, bubble gum, peanuts, kites, plants, nutrition, and more!

Most Americans had no idea what Common Core was in 2013, according to polls. But it had been creeping into schools nationwide over the previous three years, and children were feeling its effects. They cried over math homework so mystifying their parents could not help them, even in elementary school. They read motley assortments of "informational text" instead of classic literature. They dreaded the high-stakes tests, in unfamiliar formats, that were increasingly controlling their classrooms. How did this latest and most sweeping "reform" of American education come in mostly under the radar? Joy Pullmann started tugging on a thread of reports from worried parents and frustrated teachers, and it led to a big tangle of history and politics, intrigue and arrogance. She unwound it to discover how a cabal of private foundation honchos and unelected public officials cooked up a set of rules for what American children must learn in core K–12 classes, and how the Obama administration pressured states to adopt them. Thus a federalized education scheme took root, despite legal prohibitions against federal involvement in curriculum. Common Core and its testing regime were touted as "an absolute game-changer in public education," yet the evidence so far suggests that kids are actually learning less under it. Why, then, was such a costly and disruptive agenda imposed on the nation's schools? Who benefits? And how can citizens regain local self-governance in education, so their children's minds will be fed a more nourishing intellectual diet and be protected from the experiments of emboldened bureaucrats? *The Education Invasion* offers answers and remedies.

"Raymond Chen is the original raconteur of Windows." --Scott Hanselman, ComputerZen.com "Raymond has been at Microsoft for many years and has seen many nuances of Windows that others could only ever hope to get a glimpse of. With this book, Raymond shares his knowledge, experience, and anecdotal stories, allowing all of us to get a better understanding of the operating system that affects millions of people every day. This book has something for everyone, is a casual read, and I highly recommend it!" --Jeffrey Richter, Author/Consultant, Cofounder of Wintellect "Very interesting read. Raymond tells the inside story of why Windows is the way it is." --Eric Gunnerson, Program Manager, Microsoft Corporation "Absolutely essential reading for understanding the history of Windows, its intricacies and quirks, and why they came about." --Matt Pietrek, MSDN Magazine's Under the Hood Columnist "Raymond Chen has become something of a legend in the software industry, and in this book you'll discover why. From his high-level reminiscences on the design of the Windows Start button to his low-level discussions of GlobalAlloc that only your inner-geek could love, *The Old New Thing* is a captivating collection of anecdotes that will help you to truly appreciate the difficulty inherent in designing and writing quality software." --Stephen Toub, Technical Editor, MSDN Magazine "Why does Windows work the way it does? Why is Shut Down on the Start menu? (And why is there a Start button, anyway?) How can I tap into the dialog loop? Why does the GetWindowText function behave so strangely? Why are registry files called "hives"? Many of Windows' quirks have perfectly logical explanations, rooted in history. Understand them, and you'll be more productive and a lot less frustrated. Raymond Chen--who's spent more than a decade on Microsoft's Windows development team--reveals the "hidden Windows" you need to know. Chen's engaging style, deep insight, and thoughtful humor have made him one of the world's premier technology bloggers. Here he brings together behind-the-scenes explanations, invaluable technical advice, and illuminating anecdotes that bring Windows to life--and help you make the most of it. A few of the things you'll find inside: What vending machines can teach you about effective user interfaces A deeper understanding of window and dialog management Why performance optimization can be so counterintuitive A peek at the underbelly of COM objects and the Visual C++ compiler Key details about backwards compatibility--what Windows does and why Windows program security holes most developers don't know about How to make your program a better Windows citizen "Includes 8 real tests and official answer explanations"--Cover.

"This resource supports new and experienced educators who want to prepare for and design purposeful number talks for their students; the author demonstrates how to develop grade-level-specific strategies for addition, subtraction, multiplication, and division. Includes connections to national standards, a DVD, reproducibles, bibliography, and index"--Provided by publisher.

A comprehensive introduction to quasiconformal surgery in holomorphic dynamics. Contains a wide variety of applications and illustrations.

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