

Mathematics Memorandum For March 2014 Common Paper Grade 10

The first novel in Hugo Award-winning author Charles Stross's witty Laundry Files series. Bob Howard is a low-level techie working for a super-secret government agency. While his colleagues are out saving the world, Bob's under a desk restoring lost data. His world was dull and safe - but then he went and got Noticed. Now, Bob is up to his neck in spycraft, parallel universes, dimension-hopping terrorists, monstrous elder gods and the end of the world. Only one thing is certain: it will take more than a full system reboot to sort this mess out . . .

This textbook covers fundamental and advanced topics in orbital mechanics and astrodynamics to expose the student to the basic dynamics of space flight. The engineers and graduate students who read this class-tested text will be able to apply their knowledge to mission design and navigation of space missions. Through highlighting basic, analytic and computer-based methods for designing interplanetary and orbital trajectories, this text provides excellent insight into astronomical techniques and tools. This book is ideal for graduate students in Astronautical or Aerospace Engineering and related fields of study, researchers in space industrial and governmental research and development facilities, as well as researchers in astronautics. This book also:

- Illustrates all key concepts with examples
- Includes exercises for each chapter
- Explains concepts and engineering tools a student or experienced engineer can apply to mission design and navigation of space missions
- Covers fundamental principles to expose the student to the basic dynamics of space flight

"The syndicated columnist teams up with an expert on the effect of foreign labor on technology workers to challenge popular misconceptions about foreign labor and reveal corrupt practices that are undermining America's high-skill workbase,"--NoveList.

Frontiers of Pattern Recognition contains the proceedings of the International Conference on Frontiers of Pattern Recognition which took place on January 18-20, 1971, at the University of Hawaii, Honolulu. The compendium consists of 30 papers from authorities from eleven different countries, which describe the frontiers of pattern recognition as viewed from diverse viewpoints. Topics discussed include some techniques for recognizing structures in pictures, grammatical inference, syntactic pattern recognition and stochastic languages, and pattern cognition and the organization of information. Also covered are subjects on human face recognition, cluster analysis, and learning algorithms of pattern recognition in non-stationary conditions. Computer scientists, mathematicians, statisticians, linguists, and psychologists will find the book informative.

This book contains a range of keynote papers and submitted papers presented at the 10th IFIP WG 9.2, 9.5, 9.6/11.7, 11.4, 11.6/SIG 9.2.2 International Summer School, held in Edinburgh, UK, in August 2015. The 14 revised full papers included in this volume were carefully selected from a total of 43 submissions and were subject to a two-step review process. In addition, the volume contains 4 invited keynote papers. The papers cover a wide range of topics: cloud computing, privacy-enhancing technologies, accountability, measuring privacy and understanding risks, the future of privacy and data protection regulation, the US privacy perspective, privacy and security, the PRISMS Decision System, engineering privacy, cryptography, surveillance,

identity management, the European General Data Protection Regulation framework, communicating privacy issues to the general population, smart technologies, technology users' privacy preferences, sensitive applications, collaboration between humans and machines, and privacy and ethics.

Examines the role and effectiveness of science centres, how science centres are co-ordinated and organised, and how they are funded. This report also welcomes the offer by the Department for Innovation, Universities and Skills to take responsibility for science centres.

The Montgomery County (Maryland) Public Schools (MCPS) Class of 2014 consistently outperformed graduates across Maryland and the nation on all sections of the ACT, according to the ACT, Inc. annual report that was released Wednesday, August 20, 2014. Thirty percent of the graduates in the MCPS Class of 2014 took the ACT exam. According to the ACT, Inc. report, ACT participation among MCPS students has increased during the past five years, from 3,117 in 2010 to 3,153 in 2014. Benchmark scores established by ACT, Inc. indicate students' readiness for college-level coursework in English composition, algebra, social science, and biology. Forty-five percent of the Class of 2014 met all four college readiness benchmark scores according to ACT, Inc., compared to 37% in Maryland and 26% in the nation. Likewise, MCPS graduates outscored their state and national peers in each of the four subject areas: English, mathematics, reading, and science. The tables attached to this memorandum provide data on ACT participation and performance for the graduates in the Class of 2014 by student groups and by high schools. The results are based on MCPS-verified records and may differ slightly from the data report by ACT, Inc. [For the 2013 report, see ED557730.].

The Committee's report examines science and mathematics teaching in secondary schools in England, focusing on the following issues: the take-up of science and mathematics at GCSE and A-level, the provision of careers advice to students, problems in the recruitment and retention of teachers, the quality of teaching methods and the role of continuing professional development. The Committee finds that effective science teaching in schools is essential, both in order to ensure a satisfactory general level of scientific literacy in society, and to enable the next generation of scientists and engineers to progress into higher education and beyond. It argues that the current examination system forces students to study an excessively narrow range of subjects at too early an age, and it recommends that the Government should reconsider the Tomlinson proposals for a broader diploma-based system for 14-19 year old students based on the International Baccalaureate. This would ensure that students receive a more rounded education and are not made to over-specialise before they are able to see the merits of studying science and mathematics. Concerns are also raised about the shortage of science teachers, particularly specialist physics and chemistry teachers, the quality of careers advice in schools, and the importance of practical science in schools.

Nevil Shute was a writer whose books were frequently looked down on by literary critics and yet when he died in 1960 he was one of the best selling novelists of his day. Today, books such as *A Town Like Alice* and *On the Beach* continue to attract new generations of fans. However there was more to Shute than his books, a great deal more. Richard Thorn explores Shute's personal and professional life, drawing from

extensive research carried out using archives and sources in the UK, USA and Australia. Nevil Shute Norway began his professional life as an aeronautical engineer working on the outskirts of London for the newly established de Havilland Aircraft Company. He quickly went on to play a key role in Britain's ill-fated and final airship programme, before co-founding an aircraft manufacturing company at the height of an economic depression. All the while, using the pseudonym Nevil Shute, he spent his time writing for relaxation in the evenings. After the Second World War, he flew a single-engined aeroplane to Australia and back in search for new material for his novels. Fascinated by the new world that he had seen, the novelist sold up and moved his family to Australia, buying a farm in a small town on the outskirts of Melbourne. For the remainder of his life, Australia was his home and the inspiration for many of his best-loved novels. Shute tells the story of the life and times of an extraordinary man who made a significant contribution to twentieth century popular literature. This book will appeal to fans of Shute's work, those interested in his background and personal life or to readers interested in the early years of the aviation industry in Britain.

Equivalence: Elizabeth L. Scott at Berkeley is the compelling story of one pioneering statistician's relentless twenty-year effort to promote the status of women in academe and science. Part biography and part microhistory, the book provides the context and background to understand Scott's masterfulness at using statistics to help solve societal problems. In addition to being one of the first researchers to work at the interface of astronomy and statistics and an early practitioner of statistics using high-speed computers, Scott worked on an impressively broad range of questions in science, from whether cloud seeding actually works to whether ozone depletion causes skin cancer. Later in her career, Scott became swept up in the academic women's movement. She used her well-developed scientific research skills together with the advocacy skills she had honed, in such activities as raising funds for Martin Luther King Jr. and keeping Free Speech Movement students out of jail, toward policy making that would improve the condition of the academic workforce for women. The book invites the reader into Scott's universe, a window of inspiration made possible by the fact that she saved and dated every piece of paper that came across her desk.

The thoroughly revised & updated 3rd edition of 'CDS 12 Years Mathematics, English & General Knowledge Topic-wise Solved Papers (2007 Feb - 2018 Feb)' consists of last 12 years (both Feb and November papers) from 2007 Paper 1 – 2018 Paper 1 solved papers of Elementary Mathematics, English and General Knowledge distributed into 42 topics. In all there are 23 Question papers from 2007 to 2018 - I which have been divided into the above discussed 42 topics. Practicing these questions, aspirants will come to know about the pattern and toughness of the questions asked in the examination. All the papers are divided into following sections: Section I – Mathematics which is distributed into 25 topics Section II – English is divided into 8 topics Section III – General Knowledge is divided into 9 topics The book contains 6460+ MILESTONE MCQ's from the above 23 Question papers. The strength of the book lies in the originality of its question papers and Errorless Solutions. The solution of each and every question is provided in detail (step-by-step) so as to provide 100% concept clarity to the students.

Education in the Arab World is a critical reference guide to development of education in Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates and Yemen. The chapters, written by local experts, provide an overview of the education system in each country, as well as discussion of educational reforms and socio-economic and political issues. Including a comparative introduction to the issues facing education in the region as a whole, this book is an essential reference for researchers, scholars, international agencies and policy-makers.

Applied Systems and Cybernetics, Volume V: Systems Approaches in Computer Science and Mathematics covers the proceedings of the International Congress on Applied Systems Research and Cybernetics. This book discusses trends and advances in the application of

systems science and cybernetics to various fields. This volume reviews the systems approaches in computer science and mathematics and concentrates on several major areas of systems research in computer science and theoretical and applied mathematics. This book will be of great interest to computer scientists interested in the development of the theories and applications of computer science.

Contrary to popular belief--and despite the expulsion, emigration, or death of many German mathematicians--substantial mathematics was produced in Germany during 1933-1945. In this landmark social history of the mathematics community in Nazi Germany, Sanford Segal examines how the Nazi years affected the personal and academic lives of those German mathematicians who continued to work in Germany. The effects of the Nazi regime on the lives of mathematicians ranged from limitations on foreign contact to power struggles that rattled entire institutions, from changed work patterns to military draft, deportation, and death. Based on extensive archival research, *Mathematicians under the Nazis* shows how these mathematicians, variously motivated, reacted to the period's intense political pressures. It details the consequences of their actions on their colleagues and on the practice and organs of German mathematics, including its curricula, institutions, and journals. Throughout, Segal's focus is on the biographies of individuals, including mathematicians who resisted the injection of ideology into their profession, some who worked in concentration camps, and others (such as Ludwig Bieberbach) who used the "Aryanization" of their profession to further their own agendas. Some of the figures are no longer well known; others still tower over the field. All lived lives complicated by Nazi power. Presenting a wealth of previously unavailable information, this book is a large contribution to the history of mathematics--as well as a unique view of what it was like to live and work in Nazi Germany.

These Proceedings contain a selection of papers presented at the first IFAC Symposium on Design Methods of Control Systems. The volume contains three plenary papers and 97 technical papers, the latter classified under 15 section headings, as listed in the contents.

The field of computer vision combines techniques from physics, mathematics, psychology, artificial intelligence, and computer science to examine how machines might construct meaningful descriptions of their surrounding environment. The editors of this volume, prominent researchers and leaders of the SRI International AI Center Perception Group, have selected sixty papers, most published since 1980, with the viewpoint that computer vision is concerned with solving seven basic problems: Reconstructing 3D scenes from 2D images Decomposing images into their component parts Recognizing and assigning labels to scene objects Deducing and describing relations among scene objects Determining the nature of computer architectures that can support the visual function Representing abstractions in the world of computer memory Matching stored descriptions to image representation Each chapter of this volume addresses one of these problems through an introductory discussion, which identifies major ideas and summarizes approaches, and through reprints of key research papers. Two appendices on crucial assumptions in image interpretation and on parallel architectures for vision applications, a glossary of technical terms, and a comprehensive bibliography and index complete the volume.

Towards Green Marine Technology and Transport covers recent developments in marine technology and transport. The book brings together a selection of papers reflecting fundamental areas of recent research and development in the fields of ship hydrodynamics, marine structures, ship design, shipyard technology, ship machinery, maritime transportation,

Most Hilltoppers believe that Western Kentucky University is unique. They take pride in its lovely campus, its friendly spirit, the loyalty of its alumni, and its academic and athletic achievements. But Western's development also illustrates a major trend in American higher education during the past century. Scores of other institutions have followed the Western pattern, growing from private normal school to state normal school, to teachers college, to general college, finally emerging as an important state university. Historian Lowell Harrison traces the Western

story from the school's origin in 1875 to the January 1986 election of its seventh president. For much of its history, Western has been led by paternalistic presidents whose major battles have been with other state schools and parsimonious legislatures. In recent years the presidents have been challenged by students and faculty who have demanded more active roles in university governance, and by a Board of Regents and the Council on Higher Education, which have raised challenging new issues. Harrison's account of the institution's development is laced with anecdotes and vignettes of some of the school's interesting personalities: President Henry Hardin Cherry, whose chapel talks convinced countless students that "the Spirit Makes the Master"; "Uncle Ed" Diddle, whose flying towel and winning teams earned national basketball fame; "Daddy" Bur-ton who could catch flies while lecturing; Miss Gabie Robertson, who held students into the next class period; the lone Japanese student who was on campus during World War II. Harrison also recalls steamboat excursions, the Great Depression and the Second World War, the astounding boom in enrollment and buildings in the 1960s, the period of student unrest, and the numerous fiscal crises that have beset the school. This is the story of an institution proud of its past and seeking to chart its course into the twenty-first century.

This book constitutes the thoroughly refereed post-conference proceedings of the Satellite Events of the 15th Extended Semantic Web Conference, ESWC 2018, held in Heraklion, Crete, Greece, in June 2018. The volume contains 41 poster and demonstration papers, 11 invited workshop papers, and 9 full papers, selected out of a total of 70 submissions. They deal with all areas of semantic web research, semantic technologies on the Web and Linked Data.

The crypto wars have raged for half a century. In the 1970s, digital privacy activists prophesied the emergence of an Orwellian State, made possible by computer-mediated mass surveillance. The antidote: digital encryption. The U.S. government warned encryption would not only prevent surveillance of law-abiding citizens, but of criminals, terrorists, and foreign spies, ushering in a rival dystopian future. Both parties fought to defend the citizenry from what they believed the most perilous threats. The government tried to control encryption to preserve its surveillance capabilities; privacy activists armed citizens with cryptographic tools and challenged encryption regulations in the courts. No clear victor has emerged from the crypto wars. Governments have failed to forge a framework to govern the, at times conflicting, civil liberties of privacy and security in the digital age—an age when such liberties have an outsized influence on the citizen–State power balance. Solving this problem is more urgent than ever. Digital privacy will be one of the most important factors in how we architect twenty-first century societies—its management is paramount to our stewardship of democracy for future generations. We must elevate the quality of debate on cryptography, on how we govern security and privacy in our technology-infused world. Failure to end the crypto wars will result in societies sleepwalking into a future where the citizen–State power balance is determined by a twentieth-century status quo unfit for this century, endangering both our privacy and security. This book provides a history of the crypto wars, with the hope its chronicling sets a foundation for peace.

This collection of refereed papers celebrates the contributions, achievements, and progress of female mathematicians, mostly in the 20th and 21st centuries. Emerging from the themed paper session "The Contributions of Women to Mathematics: 100 Years and Counting" at MAA's 2015 MathFest, this volume contains a diverse mix of current scholarship and exposition on women and mathematics, including biographies, histories, and cultural discussions. The multiplicity of authors also ensures a wide variety of perspectives. In inspiring and informative chapters, the authors featured in this volume reflect on the accomplishments of women in mathematics, showcasing the changes in mathematical culture that resulted as more women obtained tenure-track and tenured academic positions, received prestigious awards and

honors, served in leadership roles in professional societies, and became more visibly active in the mathematical community. Readers will find discussions of mathematical excellence at Girton College, Cambridge, in the late 19th and early 20th centuries; of perseverance by Polish women in mathematics during and after World War II and by Black women in mathematics in the United States from the 1880s onward; and of the impact of outreach programs ranging from EDGE's promotion of graduate education to the Daughters of Hypatia dance performances. The volume also provides informative biographies of a variety of women from mathematics and statistics, many of them well-known and others less well-known, including Charlotte Angas Scott, Emmy Noether, Mina Rees, Gertrude Cox, Euphemia Lofton Haynes, Norma Hernandez, Deborah Tepper Haimo, and Teri Perl. These essays provide compelling reading for a wide audience, including mathematicians, historians of science, teachers of mathematics, and students at the high school, college, and graduate levels. Anyone interested in attracting more girls and women as students, faculty, and/or employees will also find this volume engaging and enlightening.

The First Edition of the book is a collection of articles, all by the author, on the Indian mathematical genius Srinivasa Ramanujan as well as on some of the greatest mathematicians in history whose life and works have things in common with Ramanujan. It presents a unique comparative study of Ramanujan's spectacular discoveries and remarkable life with the monumental contributions of various mathematical luminaries, some of whom, like Ramanujan, overcame great difficulties in life. Also, among the articles are reviews of three important books on Ramanujan's mathematics and life. In addition, some aspects of Ramanujan's contributions, such as his remarkable formulae for the number pi, his path-breaking work in the theory of partitions, and his fundamental observations on quadratic forms, are discussed. Finally, the book describes various current efforts to ensure that the legacy of Ramanujan will be preserved and continue to thrive in the future. This Second Edition is an expanded version of the first with six more articles by the author. Of note is the inclusion of a detailed review of the movie *The Man Who Knew Infinity*, a description of the fundamental work of the SASTRA Ramanujan Prize Winners, and an account of the Royal Society Conference to honour Ramanujan's legacy on the centenary of his election as FRS.

History of Programming Languages presents information pertinent to the technical aspects of the language design and creation. This book provides an understanding of the processes of language design as related to the environment in which languages are developed and the knowledge base available to the originators. Organized into 14 sections encompassing 77 chapters, this book begins with an overview of the programming techniques to use to help the system produce efficient programs. This text then discusses how to use parentheses to help the system identify identical subexpressions within an expression and thereby eliminate their duplicate calculation. Other chapters consider FORTRAN programming techniques needed to produce optimum object programs. This book discusses as well the developments leading to ALGOL 60. The final chapter presents the biography of Adin D. Falkoff. This book is a valuable resource for graduate students, practitioners, historians, statisticians, mathematicians, programmers, as well as computer scientists and specialists.

Control and Dynamic Systems: Advances in Theory and Applications reviews progress in the field of control and dynamic systems theory and applications. Topics include multistage models and fitting them to input/output data; computer-aided control systems design techniques; multilevel optimization of multiple arc trajectories; and nonlinear smoothing techniques. Solutions of dynamic games are also considered, and a survey of Soviet contributions to control theory is presented. Comprised of six chapters, this volume begins with a discussion on a number of important issues with respect to the modeling of a dynamic system, the beginning point for the resolution of the system synthesis problem. Issues with respect to the utilization of the Kalman filter as a concise model for the identification of a large class of dynamic systems are explored, along with computational and convergence issues. The application of computer-aided design techniques to control engineering

problems is the subject of the next chapter. The book also evaluates multilevel systems optimization techniques and their application to a rather complex systems problem before concluding with an overview of the evolutionary growth of Soviet contributions to control theory. This monograph will be useful to mathematicians and engineers.

- Latest Board Examination Paper with Scheme of Valuation
- Strictly as per the latest syllabus, blueprint & design of the question paper.
- Board-specified typologies of questions for exam success
- Perfect answers with Board Scheme of Valuation
- Hand written Toppers Answers for exam-oriented preparation
- NCERT Textbook Questions fully solved
- Solutions of PUE Textbook Questions
- Previous Years' Board Examination Questions

One of the most prominent mathematicians of the twentieth century, Abraham Robinson discovered and developed nonstandard analysis, a rigorous theory of infinitesimals that he used to unite mathematical logic with the larger body of historic and modern mathematics. In this first biography of Robinson, Joseph Dauben reveals the mathematician's personal life to have been a dramatic one: developing his talents in spite of war and ethnic repression, Robinson personally confronted some of the worst political troubles of our times. With the skill and expertise familiar to readers of Dauben's earlier works, the book combines an explanation of Robinson's revolutionary achievements in pure and applied mathematics with a description of his odyssey from Hitler's Germany to the United States via conflict-ridden Palestine and wartime Europe. Robinson was born in Prussia in 1918. As a boy, he fled with his mother and brother Saul to Palestine. A decade later he narrowly escaped from Paris as the Germans invaded France. Having spent the rest of World War II in England, at the Royal Aircraft Establishment in Farnborough, he began his teaching career at the Royal College of Aeronautics. Subsequently he moved to universities in Canada, Israel, and finally the United States. A joint appointment in mathematics and philosophy at UCLA led to a position at Yale University, where Robinson served as Sterling Professor of Mathematics until his untimely death at the age of fifty-five. Originally published in 1995. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These editions preserve the original texts of these important books while presenting them in durable paperback and hardcover editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

This is the first comprehensive book on Military Cost-Benefit Analysis and provides novel approaches to structuring cost-benefit and affordability analysis amidst an uncertain defense environment and cloudy fiscal prospects. Lifting the veil on military Cost-Benefit Analysis, this volume offers several new practical tools designed to guide defense investments (and divestments), combined with a selection of real-world applications. The widespread employment of Cost-Benefit Analysis

offers a unique opportunity to transform legacy defense forces into efficient, effective, and accountable 21st century organizations. A synthesis of economics, statistics and decision theory, CBA is currently used in a wide range of defense applications in countries around the world: i) to shape national security strategy, ii) to set acquisition policy, and iii) to inform critical investments in people, equipment, infrastructure, services and supplies. As sovereign debt challenges squeeze national budgets, and emerging threats disrupt traditional notions of security, this volume offers valuable tools to navigate the political landscape, meet calls for fiscal accountability, and boost the effectiveness of defense investments to help guarantee future peace and stability. A valuable resource for scholars, practitioners, novices and experts, this book offers a comprehensive overview of Military Cost-Benefit Analysis and will appeal to anyone interested or involved in improving national security, and will also be of general interest to those responsible for major government programs, projects or policies.

Information Control Problems in Manufacturing Technology 1982 documents the proceedings of the 4th IFAC/IFIP Symposium held in Maryland, USA, on 26-28 October 1982. The volume contains 27 papers divided into six sections. The papers in Section 1 cover the various US government programs sponsoring manufacturing-related research. This support ranges from basic process physics research to general questions of artificial intelligence in the manufacturing environment. At the heart of any manufacturing operation are the unit processes. Proper control of these processes is vital to achieving the autonomy that will eventually lead to automated manufacturing systems. Section 2 addresses these issues in terms of the general control problem involved and in the solution of specific processing problems. Section 3 presents examples of both on and off-line techniques that use novel methods of data acquisition and signal processing. Section 4 focuses on the role of industrial robots in advanced manufacturing systems. It addresses fundamental questions of manipulator design and control, and modelling of robot work environment. The ability to integrate processes and robots into an efficient manufacturing system is truly the challenge of the future. Section 5 deals with a wide range of such problems, including planning, scheduling, inventory, and decision systems. Section 6 presents specific examples of fully automated manufacturing and assembly systems.

Network Routing: Algorithms, Protocols, and Architectures, Second Edition, explores network routing and how it can be broadly categorized into Internet routing, PSTN routing, and telecommunication transport network routing. The book systematically considers these routing paradigms, as well as their interoperability, discussing how algorithms, protocols, analysis, and operational deployment impact these approaches and addressing both macro-state and micro-state in routing. Readers will learn about the evolution of network routing, the role of IP and E.164 addressing and traffic engineering in routing, the impact on router and switching architectures and their design, deployment of network routing

protocols, and lessons learned from implementation and operational experience. Numerous real-world examples bring the material alive. Extensive coverage of routing in the Internet, from protocols (such as OSPF, BGP), to traffic engineering, to security issues A detailed coverage of various router and switch architectures, IP lookup and packet classification methods A comprehensive treatment of circuit-switched routing and optical network routing New topics such as software-defined networks, data center networks, multicast routing Bridges the gap between theory and practice in routing, including the fine points of implementation and operational experience Accessible to a wide audience due to its vendor-neutral approach

"Automated scoring engines [...] require a careful balancing of the contributions of technology, NLP, psychometrics, artificial intelligence, and the learning sciences. The present handbook is evidence that the theories, methodologies, and underlying technology that surround automated scoring have reached maturity, and that there is a growing acceptance of these technologies among experts and the public." From the Foreword by Alina von Davier, ACTNext Senior Vice President Handbook of Automated Scoring: Theory into Practice provides a scientifically grounded overview of the key research efforts required to move automated scoring systems into operational practice. It examines the field of automated scoring from the viewpoint of related scientific fields serving as its foundation, the latest developments of computational methodologies utilized in automated scoring, and several large-scale real-world applications of automated scoring for complex learning and assessment systems. The book is organized into three parts that cover (1) theoretical foundations, (2) operational methodologies, and (3) practical illustrations, each with a commentary. In addition, the handbook includes an introduction and synthesis chapter as well as a cross-chapter glossary.

Professor Ailsa McKay, who was known not only for her work as a feminist economist but also her influence on Scottish social and economic policy, died in 2014 at the height of her academic career and impact on public life. Organised around the key themes of Ailsa McKay's work, this collection brings together eminent contributors to argue for the importance of making women's roles and needs more visible in economic and social policies. Feminist Economics and Public Policy presents a uniquely coherent analysis of key issues including gender mainstreaming, universal childcare provision and universal basic income security, in the context of today's challenging economic and political environments. It draws on international perspectives to look at the economic role of women, presenting readers with interrelated sections on gender budgeting and work and childcare, before concluding with a discussion on Citizens Basic Income and how it could contribute towards a more efficient, equitable social security system. The theoretical, empirical and practice based contributions assembled here present recommendations for more effective public policy, working towards a world in which women's diverse roles are recognized and fully accounted for. This book is a unique collection, which will be of

great relevance to those studying gender and economics, as well as to researchers or policy makers.

An era of sweeping cultural change in America, the postwar years saw the rise of beatniks and hippies, the birth of feminism, and the release of the first video game. It was also the era of new math. Introduced to US schools in the late 1950s and 1960s, the new math was a curricular answer to Cold War fears of American intellectual inadequacy. In the age of Sputnik and increasingly sophisticated technological systems and machines, math class came to be viewed as a crucial component of the education of intelligent, virtuous citizens who would be able to compete on a global scale. In this history, Christopher J. Phillips examines the rise and fall of the new math as a marker of the period's political and social ferment. Neither the new math curriculum designers nor its diverse legions of supporters concentrated on whether the new math would improve students' calculation ability. Rather, they felt the new math would train children to think in the right way, instilling in students a set of mental habits that might better prepare them to be citizens of modern society—a world of complex challenges, rapid technological change, and unforeseeable futures. While Phillips grounds his argument in shifting perceptions of intellectual discipline and the underlying nature of mathematical knowledge, he also touches on long-standing debates over the place and relevance of mathematics in liberal education. And in so doing, he explores the essence of what it means to be an intelligent American—by the numbers.

The first and only comprehensive review of current early childhood development theory, practices, policies, and the science behind them This unique and important book provides a comprehensive overview of the current theory, practices, and policies in early childhood development within the contexts of family, school, and community, and society at large. Moreover, it synthesizes scientifically rigorous research from an array of disciplines in an effort to identify the most effective strategies for promoting early childhood development. Research into childhood development is booming, and the scientific knowledge base concerning early childhood development is now greater than that of any other stage of the human life span. At the same time, efforts to apply that knowledge to early childhood practices, programs, and policies have never been greater or more urgent. Yet, surprisingly, until *The Handbook of Early Childhood Development Programs, Practices, and Policies*, there was no comprehensive, critical review of the applied science in the field. The book begins with in-depth coverage of child and family approaches. From there it moves onto a consideration of school- and community-based strategies. It concludes with a discussion of current social policies on health and development in early childhood and their implications. Provides a comprehensive overview of the state of the knowledge base, along with guidance for the future of the field Examines the underlying theory and basic science guiding efforts to promote early childhood development Critically reviews the strength of the empirical support for individual practices, programs, and policies Explores key opportunities and barriers policymakers and practitioners face when implementing various

approaches Pays particular attention to socioeconomically disadvantaged and other disenfranchised populations The Handbook of Early Childhood Development Programs, Practices, and Policies is a valuable resource for practitioners, scholars, graduate students, and advanced undergraduate students across the social sciences who are interested in strengthening their understanding of current strategies for promoting early childhood development and the science informing those strategies.

The history of computing has its origins at the outset of civilization, and the need for increasingly sophisticated calculations has grown as towns and communities evolved. This lively and fascinating text traces the key developments in computation -- from 3000 B.C. to the present day -- in an easy-to-follow and concise manner. Providing a comprehensive introduction to the most significant events and concepts in the history of computing, the book embarks upon a journey from ancient Egypt to modern times; taking in mechanical calculators, early digital computers, the first personal computers and mobile phones, to the history of software engineering, the evolution of programming languages and the invention of the World Wide Web, among other topics. This expanded and revised new edition also examines the birth of the software industry and the evolution of human-computer interaction, in addition to innovations such as Cloud computing, the Internet of Things, and Quantum Computing. Topics and features:

- Ideal for self-study, offering many pedagogical features such as chapter-opening key topics, chapter introductions and summaries, exercises, and a glossary
- Presents detailed information on major figures in computing, such as Boole, Babbage, Shannon, Turing, Zuse and Von Neumann
- Discusses the earliest computers developed in the United States, Germany and Britain.
- Discusses the development of the IBM 360 family of computers and its importance
- Discusses the birth of the software industry and the evolution of human-computer interaction
- Reviews the history of software engineering, programming languages, and operating systems
- Discusses the progress of the field of artificial intelligence
- Examines the impact on society of the introduction of the personal computer, the World Wide Web, and mobile phone technology
- Discusses a miscellany of innovations in computing such as cloud computing, the Internet of Things, and Quantum Computing
- Discusses legal aspects of computing and professional responsibilities of computer professionals

This clearly written and broad-ranging text both gives the reader a flavour of the history and stimulates further study in the subject. As such, it will be of great benefit to students of computer science, while also capturing the interest of the more casual reader. About the Author: Dr. Gerard O'Regan is a consultant with research interests including software quality and software process improvement, mathematical approaches to software quality, and the history of computing. He is the author of such Springer textbooks such as Concise Guide to Formal Methods, Concise Guide to Software Engineering, Mathematics in Computing, and Concise Guide to Software Testing.

The History of Modern Mathematics, Volume II: Institutions and Applications focuses on the history and progress of methodologies, techniques, principles, and approaches involved in modern mathematics. The selection first elaborates on crystallographic symmetry concepts and group theory, case of potential theory and electrodynamics, and geometrization of analytical mechanics. Discussions focus on differential geometry and least action, intrinsic differential geometry, physically-motivated research in potential theory, introduction of potentials in electrodynamics, and group theory and crystallography in the mid-19th century. The text then elaborates on Schouten, Levi-Civita, and emergence of tensor calculus, modes and manners of applied mathematics, and pure and applied mathematics in divergent institutional settings in Germany. Topics include function of mathematics within technical colleges, evolvement of the notion of applied mathematics, rise of technical colleges, and an engineering approach to mechanics. The publication examines the transformation of numerical analysis by the computer; mathematics at the Berlin Technische Hochschule/Technische Universität; and contribution of mathematical societies to promoting applications of mathematics in Germany. The selection is a valuable reference for mathematicians and researchers interested in the history of modern mathematics. Mathematical institutions in France and Germany and their role in promoting applications Relationship between mathematics and physics Foundations of mathematics Complex variable theory, geometry and topology Geometry in the spirit of Klein's Erlangen program Algebra and number theory Formative influences on mathematics in the United States This volume argues that districts are important as a lever for change given the limited success of school-by-school efforts. Policies that focus on skill development, recognize and support performance, create opportunities for collaboration, build leader capacity, and create networks of knowledge sharing hold great potential for improving districts but it will require a paradigm shift in the way we view our public school system and those who work within it - away from blame and toward complex systems change.

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