

Physics Ranking Task Exercises Abnews

Documents the troubling influence of a small group of scientists who the author contends misrepresent scientific facts to advance key political and economic agendas, revealing the interests behind their detractors on findings about acid rain, DDT, and other hazards.

The Future of Nursing explores how nurses' roles, responsibilities, and education should change significantly to meet the increased demand for care that will be created by health care reform and to advance improvements in America's increasingly complex health system. At more than 3 million in number, nurses make up the single largest segment of the health care work force. They also spend the greatest amount of time in delivering patient care as a profession. Nurses therefore have valuable insights and unique abilities to contribute as partners with other health care professionals in improving the quality and safety of care as envisioned in the Affordable Care Act (ACA) enacted this year. Nurses should be fully engaged with other health professionals and assume leadership roles in redesigning care in the United States. To ensure its members are well-prepared, the profession should institute residency training for nurses, increase the percentage of nurses who attain a bachelor's degree to 80 percent by 2020, and double the number who pursue doctorates. Furthermore, regulatory and institutional obstacles -- including limits on nurses' scope of practice -- should be removed so that the health system can reap the full benefit of nurses' training, skills, and knowledge in patient care. In this book, the Institute of Medicine makes recommendations for an action-oriented blueprint for the future of nursing.

A guide to personal finance offers advice about spending less and saving money, describing the importance of living within one's means, being self-reliant, and making sensible decisions when purchasing a car and home.

The Basics of American Government is a collaborative effort among eight current and one former faculty members in the Departments of Political Science and Criminal Justice at University of North Georgia. The purpose of this book is to offer a no-frills, low-cost, yet comprehensive overview of the American political system for students taking introductory courses in American national government. Furthermore, the work combines the best aspects of both a traditional textbook and a reader in that most chapters offer a piece of original scholarship as a case study to bolster or reinforce the material presented in the chapter. In addition, many chapters present a civic engagement-type exercise and discussion questions intended to challenge, engage, and foster student participation in the political system. The authors undertook this project for several reasons, most notably the high costs of textbooks for students and the lack of college-level scholarship found in most American Government texts. This 375-page, peer-reviewed, edited book that combines traditional material with original scholarship will cost students \$27.99, well below market standards. All of the authors are experienced classroom instructors, subject matter experts, and published researchers in the field of American politics.

This timely and hugely practical work provides a score of examples from contemporary and historical scientific presentations to show clearly what makes an oral presentation effective. It considers presentations made to persuade an audience to adopt some course of action (such as funding a proposal) as well as presentations made to communicate information, and it considers these from four perspectives: speech, structure, visual aids, and delivery. It also discusses computer-based projections and slide shows as well as overhead projections. In particular, it looks at ways of organizing graphics and text in projected images and of using layout and design to present the information efficiently and effectively.

This Intergovernmental Panel on Climate Change Special Report (IPCC-SREX) explores the challenge of understanding and managing the risks of climate extremes to advance climate change adaptation. Extreme weather and climate events, interacting with exposed and vulnerable human and natural systems, can lead to disasters. Changes in the frequency and severity of the physical events affect disaster risk, but so do the spatially diverse and temporally dynamic patterns of exposure and vulnerability. Some types of extreme weather and climate events have increased in frequency or magnitude, but populations and assets at risk have also increased, with consequences for disaster risk. Opportunities for managing risks of weather- and climate-related disasters exist or can be developed at any scale, local to international. Prepared following strict IPCC procedures, SREX is an invaluable assessment for anyone interested in climate extremes, environmental disasters and adaptation to climate change, including policymakers, the private sector and academic researchers.

(Black & White version) Fundamentals of Business was created for Virginia Tech's MGT 1104 Foundations of Business through a collaboration between the Pamplin College of Business and Virginia Tech Libraries. This book is freely available at: <http://hdl.handle.net/10919/70961> It is licensed with a Creative Commons-NonCommercial ShareAlike 3.0 license.

The artificial intelligence (AI) landscape has evolved significantly from 1950 when Alan Turing first posed the question of whether machines can think. Today, AI is transforming societies and economies. It promises to generate productivity gains, improve well-being and help address global challenges, such as climate change, resource scarcity and health crises.

Describes how patterns of information, knowledge, and cultural production are changing. The author shows that the way information and knowledge are made available can either limit or enlarge the ways people create and express themselves. He describes the range of legal and policy choices that confront.

From the bestselling author of Blink and The Tipping Point, Malcolm Gladwell's Outliers: The Story of Success overturns conventional wisdom about genius to show us what makes an ordinary person an extreme overachiever. Why do some people achieve so much more than others? Can they lie so far out of the ordinary? In this provocative and inspiring book, Malcolm Gladwell looks at everyone from rock stars to professional athletes, software billionaires to scientific geniuses, to show that the story of success is far more surprising, and far more fascinating, than we could ever have imagined. He reveals that it's as much about where we're from and what we do, as who we are - and that no one, not even a genius, ever makes it alone. Outliers will change the way you think about your own life story, and about what makes us all unique. 'Gladwell is not only a brilliant storyteller; he can see what those stories tell us, the lessons they contain' Guardian 'Malcolm Gladwell is a global phenomenon ... he has a genius for making everything he writes seem like an impossible adventure' Observer 'He is the best kind of writer - the kind who makes you feel like you're a genius, rather than he's a genius' The Times

Woodson's classic work of criticism explores how the education received by blacks has failed to give them an appreciation of themselves as a race and their contributions to history. Woodson puts forward a program that calls for the educated to learn about their past and serve the black community. (Education/Teaching)

Misogyny Online explores the worldwide phenomenon of gendered cyberhate as a significant discourse which has been overlooked and marginalised. The rapid growth of the internet has led to numerous opportunities and benefits; however, the architecture of the cybersphere offers users unprecedented opportunities to engage in hate speech. A leading international researcher in this field, Emma A. Jane weaves together data and theory from multiple disciplines and expresses her findings in a style that is engaging, witty and powerful. Misogyny Online is an important read for students and faculty members alike across the social sciences and humanities.

Nothing will ever be as easy as your school years,' well-meaning adults told her, but I knew for my daughter, and for many kids who have struggled as square pegs trying to make themselves round, this was dead wrong. When Lucy Clark's daughter graduated from school a 'failure', she started asking questions about the way we measure success. Why is there so much pressure on kids today? Where does it come from? Most importantly, as we seem to be in the grip of an epidemic of anxiety, how can we reduce that pressure? Beautiful Failure explores, through personal experience and journalistic investigation, a broken education system that fails too many kids and puts terrible pressure on all kids, including those who 'succeed'. It challenges accepted wisdoms about schooling, calls on parents to examine their own expectations, and questions the purpose of education, and indeed the purpose of childhood.

This book discusses the risks of information concealment in the context of major natural or industrial disasters – offering detailed descriptions and analyses of some 25 historical cases (Three Mile Island nuclear accident, Bhopal disaster, Challenger Space Shuttle explosion, Chernobyl nuclear disaster, Deepwater Horizon oil spill, Fukushima-Daiichi nuclear disaster, Enron's bankruptcy, Subprime mortgage crisis, Worldwide Spanish flu and SARS outbreaks, etc.) and applying these insights to selected on-going cases where such information concealment is suspected. Some successful examples of preventive anti-concealment practice are also presented. In the book, the term 'concealment' is used to represent the two distinct behaviors uncovered in the investigations: (i) facts and information about an organization and its functioning being hidden from those that need them – here the concealment can be due to various factors, such as complexity and miscommunication, to name but two – and (ii) the conscious and deliberate action of keeping important information secret or misrepresenting it. This second meaning makes up a surprisingly important part of the evidence presented. Accordingly, emphasis has been put on this second aspect and the approach is more pragmatic than academic, remaining focused on evidence-based practical and useful factors. It raises awareness and provides valuable lessons for decision-makers, risk specialists and responsible citizens alike. This work is also intended as a fact-based reference work for future academic and scholarly investigations on the roots of the problem, in particular regarding any psychological or sociological modeling of human fallibility.

This Special Issue aims to make a concrete technical contribution to the solution of the various problems related to indoor air pollution. In 11 papers, international scientists report the last findings in this field from different points of view including topics such as the IAQ legislation, the role of IAQ in schools, hospitals and (micro)environments in general, the performance of an olfactometer system or the impact of an indoor malodor, BTEX measures in a Fire Station, and a chemical characterization of e-cigarette (e-cig) refill liquids (e-liq). It seems appropriate to encourage the development of reference values or specific action values in order to better manage particularly problematic situations in these environments. In the absence of national references to be used for a comparison, it is possible to use those reported in the legislation of other European countries or, by ad hoc working groups or by analogy, to use other standards such as those relating to ambient air.

Want to tap the power behind search rankings, product recommendations, social bookmarking, and online matchmaking? This fascinating book demonstrates how you can build Web 2.0 applications to mine the enormous amount of data created by people on the Internet. With the sophisticated algorithms in this book, you can write smart programs to access interesting datasets from other web sites, collect data from users of your own applications, and analyze and understand the data once you've found it. Programming Collective Intelligence takes you into the world of machine learning and statistics, and explains how to draw conclusions about user experience, marketing, personal tastes, and human behavior in general -- all from information that you and others collect every day. Each algorithm is described clearly and concisely with code that can immediately be used on your web site, blog, Wiki, or specialized application. This book explains: Collaborative filtering techniques that enable online retailers to recommend products or media Methods of clustering to detect groups of similar items in a large dataset Search engine features -- crawlers, indexers, query engines, and the PageRank algorithm Optimization algorithms that search millions of possible solutions to a problem and choose the best one Bayesian filtering, used in spam filters for classifying documents based on word types and other features Using decision trees not only to make predictions, but to model the way decisions are made Predicting numerical values rather than classifications to build price models Support vector machines to match people in online dating sites Non-negative matrix factorization to find the independent features in a dataset Evolving intelligence for problem solving -- how a computer develops its skill by improving its own code the more it plays a game Each chapter includes exercises for extending the algorithms to make them more powerful. Go beyond simple database-backed applications and put the wealth of Internet data to work for you. "Bravo! I cannot think of a better way for a developer to first learn these algorithms and methods, nor can I think of a better way for me (an old AI dog) to reinvigorate my knowledge of the details." -- Dan Russell, Google "Toby's book does a great job of breaking down the complex subject matter of machine-learning algorithms into practical, easy-to-understand examples that can be directly applied to analysis of social interaction across the Web today. If I had this book two years ago, it would have saved precious time going down some fruitless paths." -- Tim Wolters, CTO, Collective Intellect

Over the past decade, American outlets such as PolitiFact, FactCheck.org, and the Washington Post's Fact Checker have shaken up the political world by holding public figures accountable for what they say. Cited across social and national news media, these verdicts can rattle a political campaign and send the White House press corps scrambling. Yet fact-checking is a fraught kind of journalism, one that challenges reporters' traditional roles as objective observers and places them at the center of white-hot, real-time debates. As these journalists are the first to admit, in a hyperpartisan world, facts can easily slip into fiction, and decisions about which claims to investigate and how to judge them are frequently denounced as unfair play. Deciding What's True draws on Lucas Graves's unique access to the members of the newsrooms leading this movement. Graves vividly recounts the routines of journalists at three of these hyperconnected, technologically innovative organizations and what informs their approach to a story. Graves also plots a compelling, personality-driven history of the fact-checking movement and its recent evolution from the blogosphere, reflecting on its revolutionary remaking of journalistic ethics and practice. His book demonstrates the ways these rising organizations depend on professional networks and media partnerships yet have also made inroads with the academic and philanthropic worlds. These networks have become a vital source of influence as fact-checking spreads around the world.

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This book focuses on the most recent, relevant, comprehensive and significant aspects in the well-established multidisciplinary field Laboratory Astrophysics. It focuses on astrophysical environments, which include asteroids, comets, the interstellar medium, and circumstellar and circumplanetary regions. Its scope lies between physics and chemistry, since it explores physical properties of the gas, ice, and dust present in those systems, as well as chemical reactions occurring in the gas phase, the bare dust surface, or in the ice bulk and its surface. Each chapter provides the necessary mathematical background to understand the subject, followed by a case study of the corresponding system. The book provides adequate material to help interpret the observations, or the computer models of astrophysical environments. It introduces and describes the use of spectroscopic tools for laboratory astrophysics. This book is mainly addressed to PhD graduates working in this field or observers and modelers searching for information on ice and dust processes.

Final report of the National Commission on Terrorist Attacks upon the United States.

This book tells the story of six secondary schools that have succeeded in eliminating or dramatically shrinking the achievement gap between whites and disadvantaged black and Hispanic students. It recounts the stories of the University Park Campus School (UPCS) in Worcester, the American Indian Public Charter School in Oakland, Amistad Academy in New Haven, the Cristo Rey Jesuit High School in Chicago, the KIPP Academy in the Bronx, and the SEED school in Washington, D.C.

This book covers elementary discrete mathematics for computer science and engineering. It emphasizes mathematical definitions and proofs as well as applicable methods. Topics include formal logic notation, proof methods; induction, well-ordering; sets, relations; elementary graph theory; integer congruences; asymptotic notation and growth of functions; permutations and combinations, counting principles; discrete probability. Further selected topics may also be covered, such as recursive definition and structural induction; state machines and invariants; recurrences; generating functions.

Collaborations of physicians and researchers with industry can provide valuable benefits to society, particularly in the translation of basic scientific discoveries to new therapies and products. Recent reports and news stories have, however, documented disturbing examples of relationships and practices that put at risk the integrity of medical research, the objectivity of professional education, the quality of patient care, the soundness of clinical practice guidelines, and the public's trust in medicine. Conflict of Interest in Medical Research, Education, and Practice provides a comprehensive look at conflict of interest in medicine. It offers principles to inform the design of policies to identify, limit, and manage conflicts of interest without damaging constructive collaboration with industry. It calls for both short-term actions and long-term commitments by institutions and individuals, including leaders of academic medical centers, professional societies, patient advocacy groups, government agencies, and drug, device, and pharmaceutical companies. Failure of the medical community to take convincing action on conflicts of interest invites additional legislative or regulatory measures that may be overly broad or unduly burdensome. Conflict of Interest in Medical Research, Education, and Practice makes several recommendations for strengthening conflict of interest policies and curbing relationships that create risks with little benefit. The book will serve as an invaluable resource for individuals and organizations committed to high ethical standards in all realms of medicine.

It has, improbably, been called uncommonly lucid, even riveting by The New York Times, and it was a finalist for the 2004 National Book Awards nonfiction honor. It is a literally chilling read, especially in its minute-by-minute description of the events of the morning of 9/11 inside the Twin Towers. It is The 9/11 Commission Report, which was, before its publication, perhaps one of the most anticipated government reports of all time, and has been since an unlikely bestseller. The official statement by the National Commission on Terrorist Attacks Upon the United States—which was instituted in late 2002 and chaired by former New Jersey Governor Thomas Kean—it details what went wrong on that day (such as intelligence failures), what went right (the heroic response of emergency services and self-organizing civilians), and how to avert similar future attacks. Highlighting evidence from the day, from airport surveillance footage of the terrorists to phone calls from the doomed flights, and offering details that have otherwise gone unheard, this is an astonishing firsthand document of contemporary history. While controversial in parts—it has been criticized for failing to include testimony from key individuals, and it completely omits any mention of the mysterious collapse of WTC 7—it is nevertheless an essential record of one of the most transformational events of modern times.

Explores the homogenization of American culture and the impact of the fast food industry on modern-day health, economy, politics, popular culture, entertainment, and food production.

In conjunction with top survey researchers around the world and with Nielsen Media Research serving as the corporate sponsor, the Encyclopedia of Survey Research Methods presents state-of-the-art information and methodological examples from the field of survey research. Although there are other "how-to" guides and references texts on survey research, none is as comprehensive as this Encyclopedia, and none presents the material in such a focused and approachable manner. With more than 600 entries, this resource uses a Total Survey Error perspective that considers all aspects of possible survey error from a cost-benefit standpoint.

It is one of the most extraordinary cases in the history of science: the mating calls of insects were mistaken for a "sonic weapon" that led to a major diplomatic row. Since August 2017, the world media has been absorbed in the "attack" on diplomats from the American and Canadian Embassies in Cuba. While physicians treating victims have described it as a novel and perplexing condition that involves an array of complaints including brain damage, the authors present compelling evidence that mass psychogenic illness was the cause of "Havana Syndrome." This mysterious condition that has baffled experts is explored across 11-chapters which offer insights by a prominent neurologist and an expert on psychogenic illness. A lively and enthralling read, the authors explore the history of similar scares from the 18th century belief that sounds from certain musical instruments were harmful to human health, to 19th century cases of "telephone shock," and more contemporary panics involving people living near wind turbines that have been tied to a variety of health complaints. The authors provide dozens of examples of kindred episodes of mass hysteria throughout history, in addition to psychosomatic conditions and even the role of insects in triggering outbreaks. Havana Syndrome: Mass Psychogenic Illness and the Real Story Behind the Embassy Mystery and Hysteria is a scientific detective story and a case study in the social construction of mass psychogenic illness.

The reputation of a college or institution depends upon the integrity of its faculty and administration. Though budgets are important, ethics are vital, and a host of new ethical problems now beset higher education. From MOOCs and intellectual property rights to drug industry payments and conflicts of interest, this book offers AAUP policy language and best practices to deal with all the campus-wide challenges of today's corporate university: • Preserving the integrity of research and public respect for higher education • Eliminating and managing individual and institutional financial conflicts of interest • Maintaining unbiased hiring and recruitment policies • Establishing grievance procedures and due process rights for faculty, graduate students, and academic professionals • Mastering the complications of negotiations over patents and copyright • Assuring the ethics of research involving human subjects. In a time of dynamic change Recommended Principles to Guide Academy-Industry Relationships offers an indispensable and authoritative guide to sustaining integrity and tradition while achieving great things in twenty-first century academia.

The surprising similarities in the rise and fall of the Sunni Islamic and Roman Catholic empires in the face of the modern state Coping with Defeat presents a historical panorama of the Islamic and Catholic political-religious empires and exposes striking parallels in their relationship with the modern state. Drawing on interviews, site visits, and archival research in Turkey, North Africa, and Western Europe, Jonathan Laurence demonstrates how, over hundreds of years, both Sunni and Catholic authorities experienced three major shocks and displacements—religious reformation, the rise of the nation-state, and

mass migration. As a result, Catholic institutions eventually accepted the state's political jurisdiction and embraced transnational spiritual leadership as their central mission. Laurence reveals an analogous process unfolding across the Sunni Muslim world in the twenty-first century. Identifying institutional patterns before and after political collapse, Laurence shows how centralized religious communities relinquish power at different rates and times. Whereas early Christianity and Islam were characterized by missionary expansion, religious institutions forged in the modern era are primarily defensive in nature. They respond to the simple but overlooked imperative to adapt to political defeat while fighting off ideological challenges to their spiritual authority. Among Laurence's findings is that the disestablishment of Islam—the doing away with Islamic affairs ministries in the Muslim world—would harm, not help with, reconciliation to the rule of law. Examining upheavals in geography, politics, and demography, *Coping with Defeat* considers how centralized religions make peace with the loss of prestige.

Ending the U.S. war in Iraq required redeploying 100,000 military and civilian personnel; handing off responsibility for 431 activities to the Iraqi government, U.S. embassy, USCENTCOM, or other U.S. government entities; and moving or transferring ownership of over a million pieces of property in accordance with U.S. and Iraqi laws, national policy, and DoD requirements. This book examines the planning and execution of this transition.

Given the wide-ranging implications for global competition, domestic political systems and daily life, US policymakers must prepare for the impacts of new artificial intelligence (AI)-related technologies.

Anticipating AI's impacts on the global order requires US policy makers' awareness of certain key aspects of the AI-related technologies--and how those technologies will interact with the rapidly changing global system of human societies. One area that has received little in-depth examination to date is how AI-related technologies could affect countries' domestic political systems--whether authoritarian, liberal democratic, or a hybrid of the two--and how they might impact global competition between different regimes. This work highlights several key areas where AI-related technologies have clear implications for globally integrated strategic planning and requirements.

Provides an overview of social psychology, exploring such topics as relationships, self-identity, and social influence.

Major New York Times bestseller Winner of the National Academy of Sciences Best Book Award in 2012 Selected by the New York Times Book Review as one of the ten best books of 2011 A Globe and Mail Best Books of the Year 2011 Title One of The Economist's 2011 Books of the Year One of The Wall Street Journal's Best Nonfiction Books of the Year 2011 2013 Presidential Medal of Freedom Recipient Kahneman's work with Amos Tversky is the subject of Michael Lewis's *The Undoing Project: A Friendship That Changed Our Minds* In the international bestseller, *Thinking, Fast and Slow*, Daniel Kahneman, the renowned psychologist and winner of the Nobel Prize in Economics, takes us on a groundbreaking tour of the mind and explains the two systems that drive the way we think. System 1 is fast, intuitive, and emotional; System 2 is slower, more deliberative, and more logical. The impact of overconfidence on corporate strategies, the difficulties of predicting what will make us happy in the future, the profound effect of cognitive biases on everything from playing the stock market to planning our next vacation—each of these can be understood only by knowing how the two systems shape our judgments and decisions. Engaging the reader in a lively conversation about how we think, Kahneman reveals where we can and cannot trust our intuitions and how we can tap into the benefits of slow thinking. He offers practical and enlightening insights into how choices are made in both our business and our personal lives—and how we can use different techniques to guard against the mental glitches that often get us into trouble. Winner of the National Academy of Sciences Best Book Award and the Los Angeles Times Book Prize and selected by The New York Times Book Review as one of the ten best books of 2011, *Thinking, Fast and Slow* is destined to be a classic.

New edition. In 1629 the Dutch East India merchantman, the *Batavia* was wrecked off the coast of West Australia while on a voyage to Indonesia. What followed this disaster is a harrowing tale of desertion, betrayal and murder. This updated edition includes new photographs. A replica of the *Batavia* is in Sydney Harbour.

In a world where advanced knowledge is widespread and low-cost labor is readily available, U.S. advantages in the marketplace and in science and technology have begun to erode. A comprehensive and coordinated federal effort is urgently needed to bolster U.S. competitiveness and pre-eminence in these areas. This congressionally requested report by a pre-eminent committee makes four recommendations along with 20 implementation actions that federal policy-makers should take to create high-quality jobs and focus new science and technology efforts on meeting the nation's needs, especially in the area of clean, affordable energy: 1) Increase America's talent pool by vastly improving K-12 mathematics and science education; 2) Sustain and strengthen the nation's commitment to long-term basic research; 3) Develop, recruit, and retain top students, scientists, and engineers from both the U.S. and abroad; and 4) Ensure that the United States is the premier place in the world for innovation. Some actions will involve changing existing laws, while others will require financial support that would come from reallocating existing budgets or increasing them. *Rising Above the Gathering Storm* will be of great interest to federal and state government agencies, educators and schools, public decision makers, research sponsors, regulatory analysts, and scholars.

Beautiful Failures Random House Australia

What do Bach's compositions, Rubik's Cube, the way we choose our mates, and the physics of subatomic particles have in common? All are governed by the laws of symmetry, which elegantly unify scientific and artistic principles. Yet the mathematical language of symmetry—known as group theory—did not emerge from the study of symmetry at all, but from an equation that couldn't be solved. For thousands of years mathematicians solved progressively more difficult algebraic equations, until they encountered the quintic equation, which resisted solution for three centuries. Working independently, two great prodigies ultimately proved that the quintic cannot be solved by a simple formula. These geniuses, a Norwegian named Niels Henrik Abel and a romantic Frenchman named Évariste Galois, both died tragically young. Their incredible labor, however, produced the origins of group theory. The first extensive, popular account of the mathematics of symmetry and order, *The Equation That Couldn't Be Solved* is told not through abstract formulas but in a beautifully written and dramatic account of the lives and work of some of the greatest and most intriguing mathematicians in history.

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