Astronomy Olympiad Books

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Schaum's Outline of Astronomy McGraw Hill Professional
"This book provides a contemporary and complete introduction to astrophysics for astronomy and physics majors."--
Lecture-tutorials for Introductory Astronomy World Scientific
A substantial update of this award-winning and highly regarded cosmology textbook, for advanced undergraduates in physics and astronomy.
A First Step to Mathematical Olympiad Problems Cambridge University Press
The present book has been specially published for the candidates of 'International Earth Science Olympiad (IESO)' Entrance Test. Based on the current pattern of the exam, the book is highly recommended for the aspirants. Various sections have been provided in the book for detailed study of important subjects of the exam. All the practice questions have been solved by respective subjectexperts. Previous Exam Solved Papers have also been provided for the candidates to be familiar with the exam pattern, the type of questions asked, and their answers. Purple Patches of the Book: The Book based on the Current Pattern of Examination; Specialised Study Material with Previous Exam Solved Papers; Each Topic Discussed Chapterwise in a Lucid Manner in Detail; Each Chapter Contains Sufficient Number of Solved MCQs; Selected MCQs Provided with Detailed Explanatory Answers. Based on the Current Pattern of Exam, the book will prove very useful for study, practice and during precious moments before the exam for reference and revision. It is highly recommended to Sharpen your Problem Solving Skills with thorough practice of numerous questions provided in the book, and prepare yourself to face the exam with Confidence, Successfully.
Astrophysics for Young People in a Hurry Cambridge University Press
Education research shows that students learn by doing.
Problems And Solutions In Mathematical Olympiad (High School 2) World Scientific
An innovative textbook that provides a unique approach to beginning research in cosmology and high energy astrophysics through a series of problems and answers.
AN INTRODUCTION TO ASTROPHYSICS World Scientific
This publication explores the 'space education phenomenon', and how it contributes to STEM betterment by motivating students and facilitating teaching. Contents were grouped in three main sections: (a) space and education, (b) space education at NASA, and (c) state-of-the-art practices in space science education at NASA and the Brazilian space agency. The book is a reference to educators, STEM education specialists and project managers, researchers, and the general public. Educators can identify possibilities to enrich STEM classes. Researchers in STEM education and/or space education will find here analyses of this historically recent area of investigation. This book is an important resource for project managers, as they could access several implementation models on space education at NASA, Brazil and beyond.
Physics of Light and Optics (Black & White) W. W. Norton
This book is a superposition of two distinct narratives: the first is historical, discussing the evolution of astronomical knowledge since the dawn of civilizations; the second is scientific,

conveying mathematical and physical content of each advancement. Great scientists of antiquity, Middle Ages and modern times until the 18th century, are presented along with their discoveries, through short biographies and anecdotes. Special care is taken to explain their achievements using mathematical and physical concepts of their time, with modern perspective added only when ancient methodology is too cumbersome or its language hardly understandable to contemporary readers.The book conveys a lot of astronomical facts and data in a pleasant and accessible manner. Almost all findings and discoveries made in ancient times are followed by simple mathematical exercises using basic knowledge, so that the reader can check the assertions himself. The book contains a lot of inedited illustrations. Geometrical schemes are given extra attention to make the examples clear and understandable. The language is simple and accessible to the young audience.

Challenge and Thrill of Pre-College Mathematics Cambridge University Press

Astronomical Problems: An Introductory Course in Astronomy covers astronomical problems, together with a summary of the theory and the formula to be exercised. The book discusses the types of problems solved with the help of the celestial globe and how to solve astronomical problems. The text tackles problems on interpolation, the celestial sphere, systems of celestial coordinates, and culmination. Problems about the rising and setting of a heavenly body, precession, planetary movement, and parallax and aberration are also considered. The book presents problems about refraction, the apparent motion of the sun, time and longitude, and the calendar. The text also demonstrates problems related to the moon, planets, stars, comets, meteors and meteorites, and the structure of the universe. Miscellaneous problems and problems of artificial celestial bodies are also examined. Teachers and students of astronomy will find the book useful.

TEXTBOOK OF ASTRONOMY AND ASTROPHYSICS. Macmillan Higher Education

Fundamental Astronomy is a well-balanced, comprehensive introduction to classical and modern astronomy. While emphasizing both the astronomical concepts and the underlying physical principles, the text provides a sound basis for more profound studies in the astronomical sciences. This is the fifth edition of the successful undergraduate textbook and reference work. It has been extensively modernized and extended in the parts dealing with extragalactic astronomy and cosmology. You will also find augmented sections on the solar system and extrasolar planets as well as a new chapter on astrobiology. Long considered a standard text for physical science majors, Fundamental Astronomy is also an excellent reference work for dedicated amateur astronomers.

Introduction to Cosmology World Scientific Publishing Company

A textbook that facilitates learning by doing.

Exploring the History of Southeast Asian Astronomy Ramesh Publishing House

This new revision of a standard work gives a general but comprehensive introduction to positional astronomy. Useful for researchers as well as undergraduates.

An Introduction to Modern Astrophysics Springer Nature

This study guide for the Chemistry Olympiad contains summarized concepts and examples in all areas of chemistry. The chapters are arranged in a logical manner and establishes connections between concepts. Undergraduate chemistry concepts are explained clearly: every equation in physical chemistry is derived and justified while every organic reaction has its reaction mechanism shown and explained, without assuming that readers have university-level background in the subject. The book also contains original Chemistry Olympiad sample problems that readers may use to test their knowledge.This is a first book of its kind, written by Nan Zhihan, International Chemistry Olympiad (IChO) gold medallist and winner of the International Union of Pure and Applied Chemistry (IUPAC) Prize for achieving the highest score in the experimental exam, and experienced Chemistry Olympiad trainer Dr Zhang Sheng, who has served as head mentor of Singapore IChO team for many years. It builds on the experience of both a participant and trainer to help any aspiring Chemistry Olympiad student understand the challenging concepts in chemistry.

International Physics Olympiads Nova Science Publishers

Feel at home among the stars with this acclaimed astronomy self-teaching guide . . . "A lively, up-to-date account of the basic principles of astronomy and exciting current fields of research."-Science Digest "One of the best ways by which one can be introduced to the wonders of astronomy."-The Strolling Astronomer "Excellent . . . provides stimulating reading and actively involves the reader in astronomy."-The Reflector From stars, planets, and galaxies to the mysteries of black holes, the Big Bang, and the possibility of life on other planets, this new edition of Astronomy: A Self-Teaching Guide brings the fascinating night sky to life for every student and amateur stargazer. With a unique self-teaching format, Astronomy clearly explains the essentials covered in an introductory college-level course. Written by an award-winning author, this practical guide offers beginners an easy way to quickly grasp the basic principles of astronomy. To help you further appreciate the wonders of the cosmos, this book also includes: Star and Moon maps that identify objects in the sky Objectives, reviews, and self-tests that monitor your progress Simple activities that help you to test basic principles at your own pace Updated with the latest discoveries, new photographs, and references to the best astronomy Web sites, this newest edition of Astronomy imparts an extraordinary appreciation of the elegant beauty of the universe. Over 2 Million Wiley Self-Teaching Guides in Print

200 Puzzling Physics Problems Cambridge University Press

This edited volume contains 24 different research papers by members of the History and Heritage Working Group of the Southeast Asian Astronomy Network. The chapters were prepared by astronomers from Australia, France, Germany, India, Indonesia, Japan, Malaysia, the Philippines, Scotland, Sweden, Thailand and Vietnam. They represent the latest understanding of cultural and scientific interchange in the region over time, from ethnoastronomy to archaeoastronomy and more. Gathering together researchers from various locales, this volume enabled new connections to be made in service of building a more holistic vision of astronomical history in Southeast Asia, which boasts a proud and deep tradition.

A Student's Guide to the Mathematics of Astronomy Elsevier

The correct use of the pawns is one of the most difficult aspects of chess strategy, but GM Sam Shankland breaks down the principles of Pawn Play to basic, easily understandable guidelines every chess player should know. He starts with extremely simple examples, but then lifts the level, showing how grandmasters could have made better decisions by using the book's guidelines.

Learning Astronomy by Doing Astronomy W. W. Norton & Company

"An Introduction to Modern Astrophysics, "Second Edition has been thoroughly revised to reflect the dramatic changes and advancements in astrophysics that have occurred over the past decade. The Second Edition of this market-leading book has been updated to include the latest results from relevant fields of astrophysics and advances in our theoretical understanding of astrophysical phenomena. The Tools of Astronomy: The Celestial Sphere, Celestial Mechanics, The Continuous Spectrum of Light, The Theory of Special Relativity, The Interaction of Light and Matter, Telescopes; The Nature of Stars: Binary Systems and Stellar Parameters, The Classification of Stellar Spectra, Stellar Atmospheres, The Interiors of Stars, The Sun, The Process of Star Formation, Post-Main-Sequence Stellar Evolution, Stellar Pulsation, Supernovae, The Degenerate Remnants of Stars, Black Holes, Close Binary Star Systems; Planetary Systems: Physical Processes in the Solar System, The Terrestrial Planets, The Jovian Worlds, Minor Bodies of the Solar System, The Formation of Planetary Systems; Galaxies and the Universe: The Milky Way Galaxy, The Nature of Galaxies, Galactic Evolution, The Structure of the Universe, Active Galaxies, Cosmology, The Early Universe; Astronomical and Physical Constants, Unit Conversions Between SI and cgs, Solar System Data, The Constellations, The Brightest Stars, The Nearest Stars, Stellar Data, The Messier Catalog, Constants, A Constants Module for Fortran 95 (Available as a C++ header file), Orbits, A Planetary Orbit Code (Available as Fortran 95 and C++ command line versions, and Windows GUI), TwoStars, A Binary Star Code (Generates synthetic light and radial velocity curves; available as Fortran 95 and C++ command line versions, and Windows GUI), StatStar, A Stellar Structure Code (Available as Fortran 95 and C++ command line versions, and Windows GUI), StatStar, Stellar Models, Galaxy, A Tidal Interaction Code (Available as Java), WMAP Data. For all readers interested in moden astrophysics.

Cosmology and Astrophysics Through Problems Cambridge University Press

The series is edited by the head coaches of China's IMO National Team. Each volume, catering to different grades, is contributed by the senior coaches of the IMO National Team. The Chinese edition has won the award of Top 50 Most Influential Educational Brands in China.The series is created in line with the mathematics cognition and intellectual development levels of the students in the corresponding grades. All hot mathematics topics of the competition are included in the volumes and are organized into chapters where concepts and methods are gradually introduced to equip the students with necessary knowledge until they can finally reach the competition level.In each chapter, well-designed problems including those collected from real competitions are provided so that the students can apply the skills and strategies they have learned to solve these problems. Detailed solutions are provided selectively. As a feature of the series, we also include some solutions generously offered by the members of Chinese national team and national training team.

Problems And Solutions In Mathematical Olympiad (High School 1) Cambridge University Press

Lecture-Tutorials for Introductory Astronomy provides a collection of 44 collaborative learning, inquiry-based activities to be used in introductory astronomy courses. Based on education research, these activities are "classroom ready" and lead to deeper, more complete student understanding through a series of structured questions that prompt students to use reasoning and identify and correct their misconceptions. All content has been extensively field tested and six new tutorials have been added that respond to reviewer demand, numerous interviews, and nationally conducted workshops. An Instructor Resource Center page is available with complete notes and text art.

Astronomy World Scientific

Neil deGrasse Tyson’s #1 New York Times best-selling guide to the cosmos, adapted for young readers. From the basics of physics to big questions about the nature of space and time, celebrated astrophysicist and science communicator Neil deGrasse Tyson breaks down the mysteries of the cosmos into bite-sized pieces. Astrophysics for Young People in a Hurry describes the fundamental rules and unknowns of our universe clearly—and with Tyson’s characteristic wit, there’s a lot of fun thrown in, too. This adaptation by Gregory Mone includes full-color photos, infographics, and extra explanations to make even the trickiest concepts accessible. Building on the wonder inspired by outer space, Astrophysics for Young People in a Hurry introduces an exciting field and the principles of scientific inquiry to young readers.

Learning Astronomy by Doing Astronomy, 2nd Edition Workbook Addison-Wesley

Despite remarkable advances in astronomy, space research, and related technology since the first edition of this book was published, the philosophy of the prior editions has remained the same throughout. However, because of this progress, there is a need to update the information and present the new findings. In the fourth edition of Astronomy: Principles and Practice, much like the previous editions, the celebrated authors give a comprehensive and systematic treatment to the theories of astronomy. This reference furthers your study of astronomy by presenting the basic software and hardware, providing several straightforward mathematical tools, and discussing some simple physical processes that are either involved in the astronomer's tools of trade or concerned in the mechanisms associated with astronomical bodies. The first six chapters introduce the simple observations that can be made by the eye as well as discuss how such observations were interpreted by previous civilizations. The next several chapters examine the interpretation of positional measurements and the basic principles of celestial mechanics. The authors then explore radiation, optical telescopes, and radio and high-energy technologies. They conclude with practical projects and exercises. New to the Fourth Edition: Revised values such as the obliquity of the ecliptic Expanded material that is devoted to new astronomies and techniques such as optical data recording A listing of Web sites that offer information on relevant astronomical events Revised and expanded, this edition continues to offer vital information about the fundamentals of astronomy. Astronomy: Principles and Practice, Fourth Edition satisfies the need of anyone who has a strong desire to understand the philosophy and applications of the science of astronomy.

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