principles of physics 9th edition jearl walker Document

principles of physics 9th edition jearl walker is a comprehensive and widely acclaimed textbook that serves as a foundational resource for students and educators delving into the fundamental concepts of physics. Authored by Jearl Walker, this edition emphasizes clarity, real-world applications, and engaging explanations to make complex topics accessible. Whether you're studying for a course, preparing for exams, or simply exploring the fascinating world of physics, understanding the principles outlined in this textbook provides a solid grounding in the physical laws that govern our universe.

Overview of Principles of Physics 9th Edition Jearl Walker

The 9th edition of Principles of Physics by Jearl Walker builds upon previous editions by incorporating updated content, new pedagogical features, and a focus on conceptual understanding. It aims to bridge the gap between theoretical physics and everyday experiences, making learning both meaningful and applicable.

Key Features of the 9th Edition

- Clear explanations of fundamental physics concepts
- Real-world examples and practical applications
- Visual aids, including diagrams and illustrations, to enhance comprehension
- End-of-chapter problems designed to reinforce learning
- Coverage of recent developments and technological advancements

Understanding these features helps students leverage the textbook effectively, ensuring that they grasp core principles while appreciating their relevance.

Core Principles Covered in Principles of Physics 9th Edition Jearl Walker

The textbook covers a broad spectrum of physics topics, organized systematically to facilitate progressive learning. Below are the primary areas of focus.

Classical Mechanics

Motion and Forces

- Newton's Laws of Motion
- Kinematics: Describing motion in one and multiple dimensions
- Dynamics: Analyzing forces and their effects on motion

Conservation Laws

- Conservation of Energy
- Conservation of Momentum
- Conservation of Angular Momentum

Applications

- Projectile motion
- Circular motion
- Work-energy theorem

Thermodynamics

Heat and Temperature

- Concepts of heat transfer
- Temperature scales

Laws of Thermodynamics

- First Law: Energy conservation in thermal processes
- Second Law: Entropy and irreversibility
- Carnot engines and efficiency

Waves and Oscillations

Wave Properties

- Types of waves: Transverse and longitudinal
- Wave interference and superposition
- Standing waves

Oscillatory Motion

- Simple harmonic motion
- Damped and forced oscillations

Electricity and Magnetism

Electrostatics

- Coulomb?s Law
- Electric fields and potentials
- Capacitance

Electric Currents and Circuits

- Ohm?s Law
- Series and parallel circuits
- Power and energy in electrical systems

Magnetism

- Magnetic fields and forces
- Electromagnetic induction
- Applications in motors and transformers

Modern Physics

Quantum Concepts

- Photoelectric effect
- Wave-particle duality
- Atomic models

Nuclear Physics

- Radioactivity
- Nuclear reactions
- Applications in medicine and energy

Relativity

- Special relativity principles
- Time dilation and length contraction

Pedagogical Approach of Jearl Walker in the 9th Edition

Jearl Walker?s teaching philosophy emphasizes making physics relatable and engaging for students. The 9th edition incorporates several pedagogical strategies to facilitate effective learning.

Visual Learning Aids

- Detailed diagrams illustrate complex concepts
- Photographs and real-world images contextualize theories

Conceptual Emphasis

- Focus on understanding principles rather than rote memorization
- Use of analogies and everyday examples to clarify abstract ideas

Problem-Solving Strategies

- Step-by-step solutions guide students through reasoning processes
- Varied difficulty levels in exercises to build confidence

Interactive Features

- End-of-chapter summaries and review questions
- Online resources and supplementary materials for extended learning

How to Maximize Learning from Principles of Physics 9th Edition Jearl Walker

To get the most out of this textbook, students should adopt effective study habits.

Active Reading

- Take notes while reading to reinforce concepts
- Highlight key ideas and formulas

Practice Problems

- Complete all end-of-chapter exercises
- Challenge oneself with additional problems for mastery

Use Visuals Effectively

- Refer to diagrams and illustrations to understand spatial relationships
- Draw sketches when solving problems

Seek Clarification

- Discuss challenging topics with instructors or peers
- Utilize online forums and resources related to the textbook

Connect Theory to Practice

- Observe real-world phenomena that illustrate principles
- Conduct simple experiments or demonstrations when possible

Resources and Supplementary Materials

The 9th edition of Principles of Physics by Jearl Walker is complemented by various resources to enhance learning:

- Online tutorials and videos explaining key concepts
- Interactive simulations and animations
- Solution manuals and study guides

- Access to online problem sets for practice

These tools help reinforce understanding and provide diverse avenues for exploring physics topics.

Conclusion

Understanding the principles of physics 9th edition jearl walker is essential for anyone interested in the fundamental laws that describe our universe. This edition offers a balanced approach combining theory, application, and visuals to foster deep comprehension. By engaging actively with the material, practicing problem-solving, and utilizing available resources, students can develop a solid foundation in physics that not only prepares them academically but also enhances their appreciation of the physical world around them. Whether you're a student, educator, or enthusiast, this textbook remains a valuable guide on the journey to mastering physics.

Principles of Physics 9th Edition Jearl Walker: A Comprehensive Guide to Fundamental Concepts

The Principles of Physics 9th Edition by Jearl Walker has long been regarded as a cornerstone resource for students and enthusiasts seeking a clear, engaging, and thorough understanding of fundamental physics concepts. Known for its intuitive explanations, real-world applications, and a student-friendly approach, this textbook bridges the gap between abstract theories and tangible phenomena. As we delve into this edition, we will explore the core principles that underpin physics, examining how they are presented and why they remain vital for learners at all levels.

Introduction to Principles of Physics 9th Edition Jearl Walker

Jearl Walker's 9th edition of Principles of Physics continues its tradition of making physics accessible and engaging. The book is designed not just to teach equations and formulas but to foster a deeper understanding of how the universe operates. Its approach combines rigorous scientific detail with relatable examples, illustrating complex ideas through everyday experiences. Whether you're a student preparing for exams or a curious reader interested in the physical world, this edition offers a comprehensive roadmap to grasping the essentials of physics.

The book emphasizes conceptual understanding, problem-solving skills, and an appreciation for the scientific method. Its layout promotes active learning, encouraging readers to think critically about phenomena from the motion of planets to the workings of household appliances. This article explores the foundational principles covered in the book, underscoring their relevance and practical applications.

Core Principles Covered in the Book

The Principles of Physics 9th Edition is structured around the fundamental laws and concepts that

form the backbone of physics. These principles are not only essential for academic success but also for understanding the natural world.

1. Newton?s Laws of Motion

Newton?s laws are the foundation of classical mechanics, describing how objects move and interact.

- First Law (Inertia): An object remains at rest or moves uniformly in a straight line unless acted upon by an external force.
- Second Law: The acceleration of an object is directly proportional to the net force acting upon it and inversely proportional to its mass (F = ma).
- Third Law: For every action, there is an equal and opposite reaction.

In Walker?s presentation:

- The laws are explained with intuitive examples, such as a hockey puck sliding on ice, or a rocket launching.
- The book emphasizes the importance of these laws in understanding everyday phenomena, from driving a car to orbiting satellites.

Practical applications include:

- Designing safer vehicles by understanding inertia and forces.
- Calculating rocket trajectories based on force and mass.

2. Conservation Laws

Conservation principles are central to physics, asserting that certain quantities remain constant in isolated systems.

- Conservation of Energy: Energy cannot be created or destroyed; it only transforms from one form to another.
- Conservation of Momentum: The total momentum of an isolated system remains constant.
- Conservation of Charge: Electric charge is conserved in all processes.

Walker illustrates these concepts through:

- Collisions in sports, explaining conservation of momentum.
- Pendulum swings and roller coasters, demonstrating energy conservation.

Implications for real-world applications:

- Energy-efficient system designs.
- Understanding particle interactions in physics and chemistry.

3. Thermodynamics

Thermodynamics deals with heat, work, and the laws governing energy transfer.

- First Law: Energy added as heat or work changes the internal energy of a system.
- Second Law: Entropy, or disorder, tends to increase, leading to irreversibility in natural processes.
- Third Law: As temperature approaches absolute zero, entropy approaches a minimum.

Walker?s approach:

- Uses everyday examples like refrigerators, engines, and weather systems.
- Explains concepts such as heat engines and efficiency with clarity.

Real-world relevance:

- Improving engine efficiency.
- Understanding climate phenomena and energy management.

4. Electromagnetism

Electromagnetism explores electric and magnetic fields, forces, and their interactions.

- Electric Forces: Governed by Coulomb?s law, describing the attraction or repulsion between charges.
- Magnetic Forces: Result from moving charges, explained with the behavior of magnets and electric currents.
- Electromagnetic Induction: The generation of electric current by changing magnetic fields.

In the book:

- Demonstrates the operation of transformers, motors, and generators.
- Connects electromagnetic principles to modern technology like MRI machines and wireless communication.

Practical implications:

- Designing electrical circuits and devices.
- Developing wireless communication systems.

Teaching Methodology and Pedagogical Features

Walker?s Principles of Physics is distinguished by its pedagogical strengths, designed to facilitate active learning and critical thinking.

Clear Explanations and Visuals

- The book employs diagrams, illustrations, and photographs to make abstract concepts concrete.
- Step-by-step derivations and examples guide students through complex calculations.

Real-World Applications

- Each chapter includes practical examples and case studies.
- Emphasizes the relevance of physics in everyday life and technological innovations.

Problem-Solving Strategies

- Provides numerous example problems with detailed solutions.
- Encourages students to develop systematic approaches to tackling physics problems.

Interactive Elements

- End-of-chapter questions and exercises promote mastery.
- Conceptual questions challenge students to think critically beyond rote memorization.

The Impact and Legacy of Principles of Physics 9th Edition Jearl Walker

Since its publication, the 9th edition has maintained its reputation as a reliable and engaging textbook. Its balance of theoretical rigor and accessible language has made it a favorite among educators and students alike. The book?s emphasis on conceptual understanding prepares students for advanced studies in physics, engineering, and other sciences.

Furthermore, Walker?s inclusion of contemporary examples and technological contexts ensures that learners see the relevance of physics beyond classroom walls. The book also serves as a valuable reference for professionals in fields where physics principles underpin technological development and problem-solving.

In conclusion:

The Principles of Physics 9th Edition by Jearl Walker stands as a testament to effective science education. By distilling complex phenomena into understandable principles, it equips readers with the foundational knowledge necessary to navigate and appreciate the physical universe. Its pedagogical features foster active engagement, critical thinking, and application of concepts, making it an enduring resource for learners at all levels.

Whether you?re a student aiming to excel in physics, a teacher seeking a comprehensive textbook, or a curious mind eager to understand how the world works, Walker?s Principles of Physics offers a pathway to scientific literacy and a deeper appreciation of the natural laws that govern our universe.

QuestionAnswer What are the key topics covered in 'Principles of Physics 9th Edition' by Jearl Walker? The book covers fundamental physics topics such as mechanics, thermodynamics, waves, optics, electromagnetism, and modern physics, with an emphasis on conceptual understanding and real-world applications. How does Jearl Walker's approach in the 9th edition enhance student understanding of physics concepts? Walker uses engaging real-world examples, visual aids, and clear explanations to make complex concepts accessible, encouraging active learning and curiosity among students. Are there online resources or supplementary materials available for the 9th edition of 'Principles of Physics'? Yes, the 9th edition typically includes online resources such as interactive simulations, problem sets, and quizzes to reinforce learning and provide additional practice. What are some notable updates or changes in the 9th edition of 'Principles of Physics' compared to previous editions? The 9th edition features updated examples, improved illustrations, and new problem sets reflecting recent advancements and current scientific contexts to enhance clarity and relevance. Is 'Principles of Physics 9th Edition' suitable for self-study students? Yes, the book is designed to be accessible for self-study, with clear explanations, practical examples, and accompanying resources to support independent learning. How does Jearl Walker incorporate real-world applications into the teaching of physics in this edition? Walker integrates real-world

scenarios, experiments, and phenomena into the text to illustrate the relevance of physics principles in everyday life and technological advancements.

Related keywords: physics, jearl walker, principles of physics, 9th edition, textbook, mechanics, thermodynamics, electromagnetism, waves, optics

Serway physics 8th edition

Serway Physics 8th Edition: An In-Depth Guide for Students and Educators

Serway Physics 8th Edition is a comprehensive textbook widely used by physics students and educators to understand foundational and advanced concepts in physics. Authored by Raymond A. Serway, this edition continues the tradition of providing clear explanations, engaging problems, and real-world applications that enhance the learning experience. Whether you're a student preparing for exams or an instructor seeking a dependable teaching resource, the 8th edition of Serway's physics book offers valuable insights into the fundamental principles of physics, making complex topics accessible and engaging.

Overview of Serway Physics 8th Edition

Key Features and Highlights

- Clear and Concise Explanations: The book breaks down complex physics concepts into easily understandable segments, making it suitable for both beginners and advanced learners.
- Rich Visual Content: The inclusion of detailed diagrams, illustrations, and graphs helps visualize phenomena and reinforce understanding.
- Variety of Problems: The book offers numerous practice problems, from basic to challenging, to test comprehension and develop problem-solving skills.
- Real-World Applications: Examples drawn from everyday life and current technology demonstrate the relevance of physics principles.
- Integrated Learning Tools: Supplementary online resources, including quizzes, animations, and tutorials, are available to enhance the learning experience.

Target Audience

Serway Physics 8th Edition is primarily designed for:

- Undergraduate students taking introductory or intermediate physics courses
- Instructors seeking a reliable textbook for classroom teaching
- Self-learners interested in gaining a solid understanding of physics fundamentals

Content Structure of Serway Physics 8th Edition

Organizational Layout

The book is organized into multiple chapters, each focusing on specific areas of physics, such as mechanics, thermodynamics, electromagnetism, optics, and modern physics. This logical flow ensures a progressive build-up of concepts, facilitating better comprehension.

Major Sections Covered

- Introduction to Physics and Measurement: Fundamentals of scientific measurement, units, and dimensional analysis.
- Kinematics: Describing motion in one and two dimensions.
- Dynamics: Newton's laws, applications, and friction.
- Work, Energy, and Power: Conservation laws and energy transfer.
- Momentum and Collisions: Impulse, conservation of momentum.
- Rotational Motion: Angular velocity, torque, and rotational dynamics.
- Oscillations and Waves: Simple harmonic motion, wave properties.
- Thermodynamics: Heat, temperature, laws of thermodynamics.
- Electromagnetism: Electric fields, circuits, magnetic fields.
- Optics: Reflection, refraction, lenses, and mirrors.
- Modern Physics: Quantum mechanics, atomic physics, nuclear physics.

Why Choose Serway Physics 8th Edition?

Comprehensive Coverage and Depth

The 8th edition provides in-depth explanations of core physics concepts, making it suitable for courses that require a thorough understanding. It balances theory with practical applications, ensuring students grasp both the "how" and the "why."

Effective Learning Resources

The textbook is complemented by online tools, including:

- Interactive simulations
- Video tutorials
- Practice quizzes
- Problem-solving guides

These resources aid in reinforcing learning and preparing for exams effectively.

Updated Content and Pedagogical Approach

The 8th edition incorporates:

- Recent scientific developments
- Updated problem sets reflecting current technology
- Pedagogical features such as summary boxes, key terms, and review questions to facilitate active learning

How to Maximize Learning with Serway Physics 8th Edition

Study Strategies

- Read Actively: Engage with the text by highlighting key points and taking notes.
- Work Through Problems: Practice a variety of problems to strengthen problem-solving skills.
- Use Online Resources: Supplement your study with online tutorials and simulations.
- Form Study Groups: Collaborate with peers to discuss complex topics.
- Regular Review: Revisit previous chapters to reinforce retention.

Supplementary Tools and Resources

- Solution Manuals: For guided problem-solving.
- Online Quizzes: To assess understanding.
- Instructor Resources: Lecture slides and test banks for educators.

Where to Find Serway Physics 8th Edition

Purchasing Options

- Bookstores: Academic and general bookstores often stock the latest editions.

- Online Retailers: Amazon, eBay, and other e-commerce platforms offer new and used copies.
- Digital Versions: E-books and PDF formats available for quick access and portability.
- Library Access: University and public libraries may have copies available for borrowing.

Pricing and Editions

While newer editions are available, the 8th edition remains popular for its proven content and teaching approach. Prices vary based on condition, format, and seller.

Conclusion: The Value of Serway Physics 8th Edition

Choosing the right physics textbook can significantly impact your learning journey. **Serway Physics 8th Edition** stands out as a trusted, comprehensive resource that bridges theory and practice. Its well-structured content, rich visual aids, and variety of problems make it an ideal choice for students aiming to excel in physics. Educators also benefit from its pedagogical features and supplementary resources, making it a versatile tool for effective teaching.

Whether you're tackling your first physics course or delving into more advanced topics, the 8th edition of Serway's physics book provides a solid foundation and a pathway to mastery. Invest in this edition to enhance your understanding of the universe?s fundamental laws and prepare for future scientific pursuits.

Keywords for SEO Optimization:

Serway physics 8th edition, physics textbook, introductory physics, physics problems, physics solutions, physics study guide, physics concepts, physics learning resources, physics for students, physics for educators

Serway Physics 8th Edition: A Comprehensive Review and In-Depth Analysis

Physics textbooks are foundational tools for students and educators alike, serving as both instructional guides and reference materials. Among these, Serway Physics 8th Edition has garnered substantial attention for its thorough content, pedagogical approach, and clarity. This article aims to provide an in-depth, expert-level review of this edition, exploring its features, strengths, and areas for improvement.

Introduction to Serway Physics 8th Edition

Serway Physics 8th Edition, authored primarily by Raymond A. Serway and John W. Jewett, stands as a pivotal resource in college-level physics education. Building upon previous editions, the 8th edition emphasizes conceptual understanding, problem-solving skills, and real-world applications. Its

comprehensive coverage spans classical mechanics, electromagnetism, thermodynamics, waves, optics, and modern physics.

This edition is tailored for undergraduate students, aiming to foster both conceptual insight and mathematical proficiency. Its pedagogical design integrates visual aids, examples, and exercises to enhance learning outcomes.

Content Organization and Scope

Structured Approach to Physics Topics

One of the defining features of Serway Physics 8th Edition is its logical, systematic organization of topics. The book begins with fundamental concepts, gradually progressing toward more complex theories. The typical structure includes:

- Mechanics ? motion, forces, energy, momentum
- Thermal Physics ? temperature, heat, thermodynamics
- Electromagnetism ? electric and magnetic fields, circuits
- Waves and Optics ? wave properties, light behavior
- Modern Physics ? quantum mechanics, nuclear physics

This progression ensures students build a solid foundation before tackling advanced material.

Depth and Breadth of Content

The 8th edition offers an expansive treatment of topics, including:

- Classical Mechanics: Newtonian principles, rotational motion, oscillations
- Electromagnetic Theory: Maxwell?s equations, electromagnetic waves
- Thermodynamics: laws of thermodynamics, entropy, applications
- Quantum Physics: photoelectric effect, wave-particle duality
- Nuclear Physics: radioactivity, nuclear reactions

The content depth is appropriate for introductory courses but also provides enough detail for advanced exploration, making it versatile across different levels.

Pedagogical Features and Learning Tools

Clear Explanations and Visual Aids

Serway?s writing style emphasizes clarity. Complex concepts are broken down into manageable parts, often accompanied by diagrams, illustrations, and graphs that clarify the material. For example:

- Illustrations of vectors, forces, and fields
- Diagrams depicting experimental setups
- Graphs illustrating relationships between variables

These visual tools aid in conceptual understanding and retention.

Worked Examples and Practice Problems

The textbook features numerous worked examples that demonstrate problem-solving techniques step-by-step. These examples are critical for bridging theory and application, fostering analytical skills.

The end-of-chapter problems vary in difficulty, including:

- Basic comprehension questions
- Application-based problems
- Challenging exercises for advanced students

Solutions are provided for selected problems, encouraging self-assessment.

Special Features

- Conceptual Questions: To test understanding beyond calculations
- Summary Sections: Brief overviews of each chapter?s key points
- Real-World Applications: Connecting physics principles to everyday phenomena
- Online Resources: Companion website offering additional quizzes, animations, and supplementary materials

Strengths of Serway Physics 8th Edition

Comprehensive Coverage

The textbook covers a wide array of topics thoroughly, making it suitable for a full semester or even a two-course sequence. Its balanced approach ensures students grasp fundamental principles while

appreciating their applications.

Pedagogical Design

The combination of clear explanations, visual aids, and varied exercises caters to diverse learning styles. The inclusion of conceptual questions enhances critical thinking.

Problem-Solving Focus

Serway emphasizes developing problem-solving skills. The step-by-step worked examples and end-of-chapter problems bolster confidence and competence in tackling physics questions.

Quality of Visual Content

High-quality illustrations and diagrams significantly enhance comprehension. Visual learning is particularly vital in physics, where spatial reasoning is often key.

Relevance and Applications

Real-world examples and applications help students see the relevance of physics in everyday life, motivating engagement and curiosity.

Limitations and Areas for Improvement

Mathematical Rigor

While the book balances conceptual and mathematical content, some students may find certain derivations and formulas presented without sufficient background explanation, potentially posing challenges for complete novices.

Digital Integration

Although the accompanying online resources are valuable, their integration could be more seamless. Interactive simulations, for example, could be more prominently featured to enhance engagement.

Coverage of Modern Physics

Modern physics topics, such as quantum mechanics and nuclear physics, are introduced but could benefit from more in-depth discussion or additional supplementary materials for students interested in advanced concepts.

Accessibility

Language and explanations are generally clear, but some sections contain dense technical language that may require supplementary tutoring or guidance for struggling readers.

Comparison with Other Textbooks

When compared to other introductory physics texts like Halliday & Resnick or Knight?s Physics for Scientists and Engineers, Serway 8th Edition holds its own in clarity and pedagogical approach. Its strengths lie in the structured presentation and emphasis on conceptual understanding.

However, some educators and students prefer the more mathematically rigorous or application-focused content found in alternative texts. The choice ultimately depends on the course objectives and student preparedness.

Target Audience and Usage Recommendations

Serway Physics 8th Edition is ideally suited for:

- Undergraduate students taking introductory physics courses
- Instructors seeking a balanced, student-friendly textbook
- Self-learners interested in foundational physics concepts

For maximum benefit, students should complement the textbook with online simulations, problem-solving practice, and supplemental resources, especially if they aim to pursue more advanced physics topics.

Conclusion: Is Serway Physics 8th Edition a Worthy Investment?

In sum, Serway Physics 8th Edition remains a highly valuable resource in the realm of introductory physics education. Its comprehensive coverage, pedagogical clarity, and emphasis on problem-solving make it a dependable choice for students and educators alike.

While it has areas where enhancements could be made?particularly in integrating more interactive digital content and expanding on modern physics topics?it continues to serve as a robust foundation for understanding the physical universe.

For those seeking a well-structured, conceptually rich, and pedagogically sound physics textbook, Serway Physics 8th Edition stands out as a commendable option that can support learning at various levels of expertise.

QuestionAnswer What are the main topics covered in Serway Physics 8th Edition? Serway Physics 8th Edition covers fundamental topics such as mechanics, thermodynamics, electromagnetism, optics, and modern physics, providing a comprehensive overview suitable for introductory physics courses. How does Serway Physics 8th Edition incorporate real-world applications? The book integrates real-world examples and problem-solving scenarios to help students understand the practical relevance of physics principles in everyday life and technological advancements. Are there online resources or supplements available for Serway Physics 8th Edition? Yes, students can access online resources like solution manuals, practice problems, and interactive tutorials through the publisher's website to enhance their learning experience. What are the most effective ways to use Serway Physics 8th Edition for exam preparation? Focus on understanding core concepts, practice end-of-chapter problems, utilize online resources, and review summary sections to reinforce learning and prepare effectively for exams. How does Serway Physics 8th Edition address modern physics topics? The edition introduces modern physics topics such as quantum mechanics, atomic physics, and relativity, providing foundational knowledge aligned with current scientific understanding. Is Serway Physics 8th Edition suitable for self-study students? Yes, the clear explanations, worked examples, and problem sets make it a valuable resource for self-study students seeking to learn physics independently. What are the updates or new features in Serway Physics 8th Edition compared to previous editions? The 8th edition includes updated problem sets, new illustrations, expanded sections on contemporary physics topics, and enhanced online resources to improve clarity and engagement. Can Serway Physics 8th Edition help with understanding laboratory physics experiments? While primarily a theoretical textbook, it offers explanations of fundamental principles behind experiments, aiding students in understanding laboratory concepts and procedures. How do instructors typically incorporate Serway Physics 8th Edition into their curriculum? Instructors use the book for lecture material, assign problem sets from the end-of-chapter exercises, and leverage the online resources to supplement classroom instruction.

Related keywords: Serway physics, physics textbook, college physics, physics problems, physics solutions, physics exercises, physics concepts, physics study guide, physics practice problems, introductory physics

Read the full article online: SERWAY PHYSICS 8TH EDITION