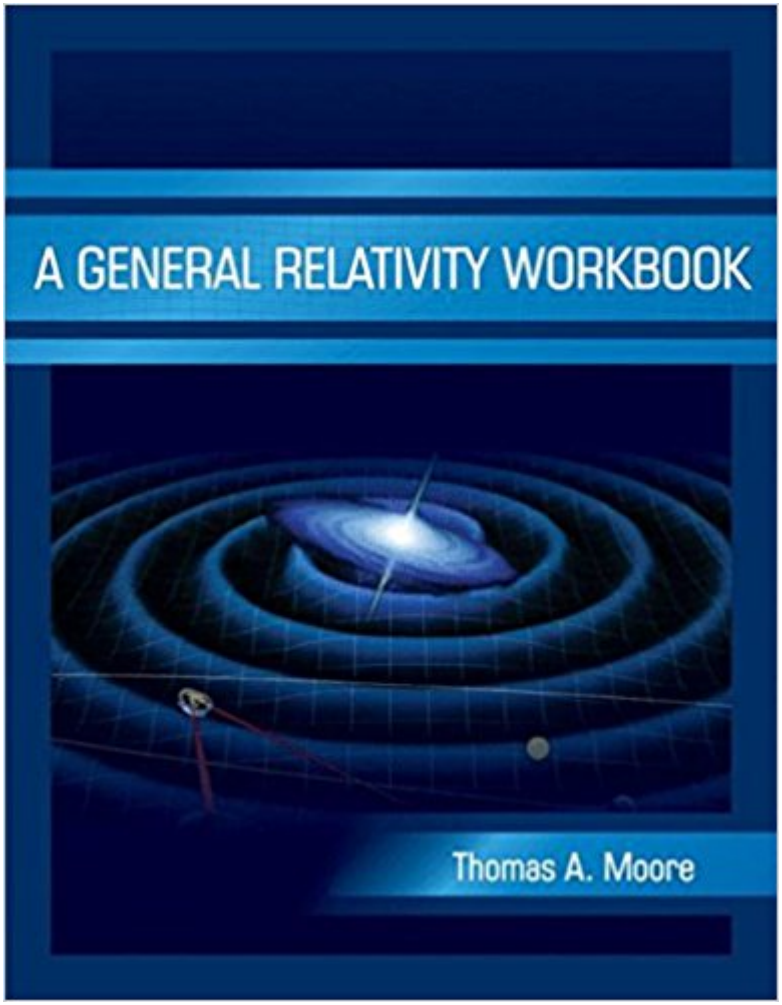
A General Relativity Workbook



Synopsis

A General Relativity Workbook is a textbook intended to support a one-semester undergraduate course on general relativity. Through its unique workbook-based design, it enables students to develop a solid mastery of both the physics and the supporting tensor calculus by guiding them to work through the implications. The mathematics is introduced gradually and in a completely physical context. Each chapter, which is designed to correspond to one class session, involves a short overview of the concepts without obscuring derivations or details, followed by a series of boxes that guide students through the process of working things out. This active-learning approach enables students to develop a more secure mastery of the material than more traditional approaches. More than 350 homework problems support further learning.

Book Information

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Customer Reviews

’Moore’s workbook makes General Relativity accessible to undergraduates who have seen little or none of the underlying mathematical framework. This is achieved not by watering down the contents, but rather by systematically guiding readers to work everything out themselves until they own the concepts and the mathematical techniques. It is indeed a workbook, which I trust will be a great success.’ --- Sergio Picozzi, University of Maryland, USAWith its clean organization, its direct and clear prose, and especially its pedagogically effective workbook format, Moore’s A General Relativity Workbook may quickly become the new standard for upper division undergraduate courses in General Relativity.’ ---John Mallinckrodt, Cal Poly Pomona, USA

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If you are zero order in general relativity and would like to know about this topic in deep, this book is what you want for sure ! Moreover, whether you’re willing to come along in this journey of different formalism of tensor calculus as well as general relativity take it on and you won’t be regretted !Enjoy it because I’ve already been enjoying it !

Getting started in GenRel is not easy. I still believe that MTW is the "gold standard" in the field. However, in the absence of an exceptionally strong background in physics and mathematics, going directly to MTW is not a realistic goal. Undergraduates need a solid foundation before tackling a grad course, and those pursuing self study need the same. This text is the answer! It provides an exceptional base of information in GenRel that would serve an undergrad or someone pursuing self-study exceptionally well. This text leads the learner through an entire basic course in GenRel, each chapter logically developing each topic. There is a plethora of problems to solve that are presented in a clear and logical manner. Solving the problems is the only way to learn GenRel. This book is the best thing going for people starting out to learn GenRel. The "workbook" concept is a great idea (I think this is the only GenRel workbook out there) and Moore carries it out perfectly! The only thing missing is a Solutions Manual for the person engaged in self-study.

An amazing book for introducing the concepts of General relativity. The author is very good at guiding the reader through the mathematics and concepts introduced in general relativity. He is able to explain the mathematics and introduces New mathematics such that anyone who has completed a second year course in mathematics can understand how it is properly used and when to use it. I highly recommend this book to anyone who is interested in learning general relativity.

Some schools may have adopted this book, but, I think the book would have been the most valuable addition to the library of a self-learner. However, that possibility does not exist because of the unavailability of a solution manual. Although, otherwise it seems to be a great book, it is almost useless for people like me who does not have a teacher available to be guided in the process of learning. I purchased this book for self study and that was a huge mistake. Physics is learned by solving problems and solving them the correct way. This workbook based manual could have been a great aid to learn GR for a person who is self studying GR but unfortunately that is not the case. Considering how many reviewers are pointing it out, Dr. Moore and the publishers should really take a look at this issue. Until then, I cannot recommend this book.

Amazing teaching reference, would supplement with a differential equations/ linear algebra book though.

Graduate school, here we come! Great tool for learning General relativity on your own.

Great book for beginning to understand GR.

Definitely a "work" book! Love the concept!

The Road to Relativity: The History and Meaning of Einstein's "The Foundation of General Relativity", Featuring the Original Manuscript of Einstein's Masterpiece Ace General Chemistry I and II (The EASY Guide to Ace General Chemistry I and II): General Chemistry Study Guide, General Chemistry Review Theory of Relativity for the Rest of Us but not for Dummies: Theory of Relativity Simplified A General Relativity Workbook Clinical Anesthesia Procedures of the Massachusetts General Hospital: Department of Anesthesia, Critical Care and Pain Medicine, Massachusetts General ... of the Massachusetts General Hospital) Relativity: The Special and the General Theory General Relativity for Babies (Baby University) Relativity; the Special and General Theory Relativity: The Special and General Theory [New Edition with Readable Equations] Gravity: An Introduction to Einstein's General Relativity Relativity: The Special and the General Theory, 100th Anniversary Edition General Relativity: An Introduction for Physicists Chern Simons (Super)Gravity (100 Years of General Relativity) General Relativity A Student's Manual for A First Course in General Relativity A First Course in General Relativity The Perfect Theory: A Century of Geniuses and the Battle over General Relativity Spacetime and Geometry: An Introduction to General Relativity Introduction to General Relativity, Black Holes and Cosmology Relativity: The Special and General Theory [Illustrated]