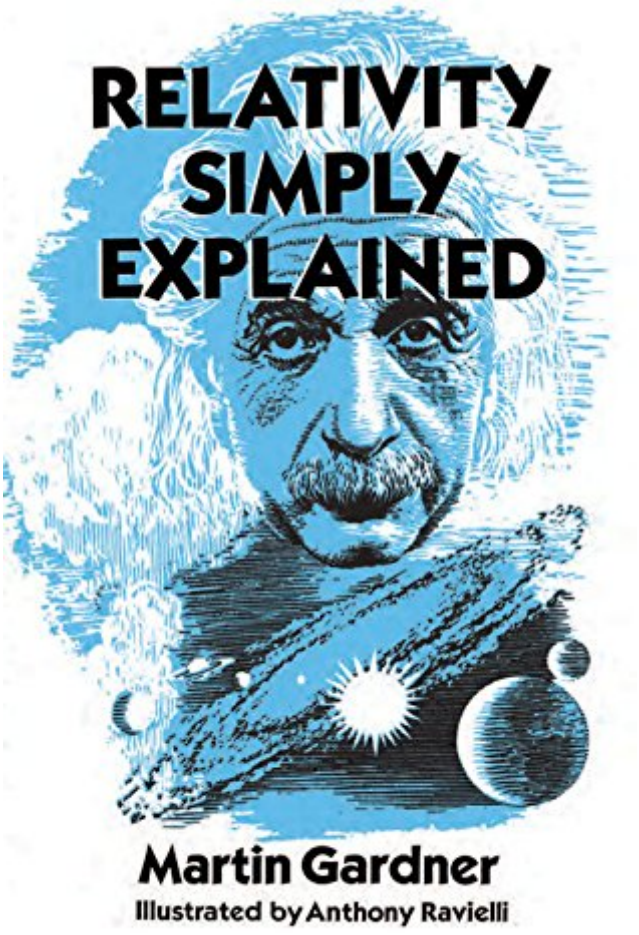
Relativity Simply Explained (Dover Classics Of Science & Mathematics)



Synopsis

Since the publication of Einstein’s Special Theory of Relativity in 1905, the discovery of such astronomical phenomena as quasars, pulsars, and black holes â ” all intimately connected to relativity â ” has provoked a tremendous upsurge of interest in the subject.This volume, a revised version of Martin Gardner’s earlier Relativity for the Million, brings this fascinating topic up to date. Witty, perceptive, and easily accessible to the general reader, it is one of the clearest and most entertaining introductions to relativity ever written. Mr. Gardner offers lucid explanations of not only the special and general theories of relativity, but of the Michelson-Morley experiment, gravity and spacetime, Mach’s principle, the twin paradox, models of the universe, and other topics. A new Postscript, examining the latest developments in the field, and specially written for this edition, is also included. The clarity of the text is especially enhanced by the brilliant graphics of Anthony Ravielli, making this "by far the best layman’s account of this difficult subject." â ” Christian Science Monitor.

Book Information

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Customer Reviews

I recently read a handful of books on relativity, and I rank them as follows:Highly recommended introductory works: * Relativity Simply Explained by Martin Gardner -- best introductory book. * The

Elegant Universe (chapters 2 & 3) by Brian Greene -- extremely lucid, but not as in-depth as Gardner's book -- possibly the best if you want a shorter introduction. * Einstein by Walter Isaacson, chapter 6 (special relativity) & chapter 9 (general relativity) -- not just a great biography, also a very lucid explanation of Einstein's ideas. * The Fabric of the Cosmos (chapters 2 & 3) by Brian Greene -- a discussion of general relativity & the nature of spacetime.Further reading: * Inside Relativity by Mook & Vargish -- great introduction to Newton, along with great sections on what high-speed objects look like and a great section on how Maxwell's equations of electromagnetism relate to relativity. *

This is the 1997 Dover edition of Martin Gardner's 1976 "The Relativity Explosion", which was itself an update of the original 1962 book, published under the title "Relativity for the Million". This present edition contains a short chapter that attempts to update the 1976 version to 1997. Given that 10 years have passed since 1997 and that many new measurements of the cosmos have been made, some of the cosmology is a bit dated. This is not, however, a severe handicap as most of the book deals with Einstein's work dating back more than 80 years.Gardner has avoided almost all mathematics, thereby producing a book that quite philosophical. It is therefore an adjunct to a physics text that contains much more of the mathematics of relativity. Given that this book aims to simply explain relativity theory, the most relevant question is how well does it do this? The answer of course depends upon the reader's background. I think that this book will be a hard slog for a person with no physics background, but if one is willing to abandon some things that they might feel are intuitively obvious then they should get quite a bit from the book. A person with some physics background should get more from the book; especially as the book clearly shows how the basic assumptions of Newtonian physics differ from those of Einstein. The discussion of Minkowski's four dimensional space-time approach is also very illuminating. (Since there is no math in the book, this and non-Euclidian geometry are only generally discussed. The implications of dealing with a four dimensional description of a universe that we can only perceive in three dimensions helped to clarify some misconceptions that I had concerning the various analogies used to explain general relativity.

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